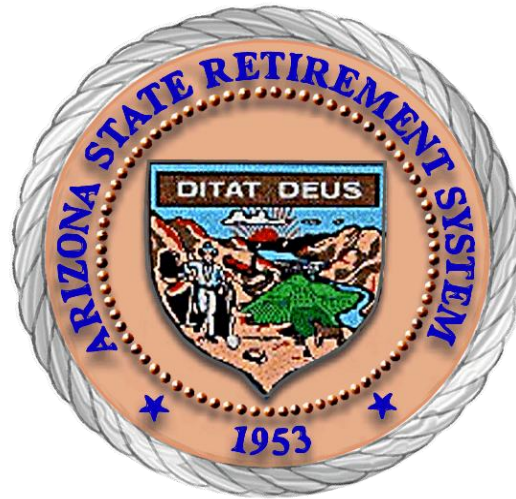


# Arizona State Retirement System Board



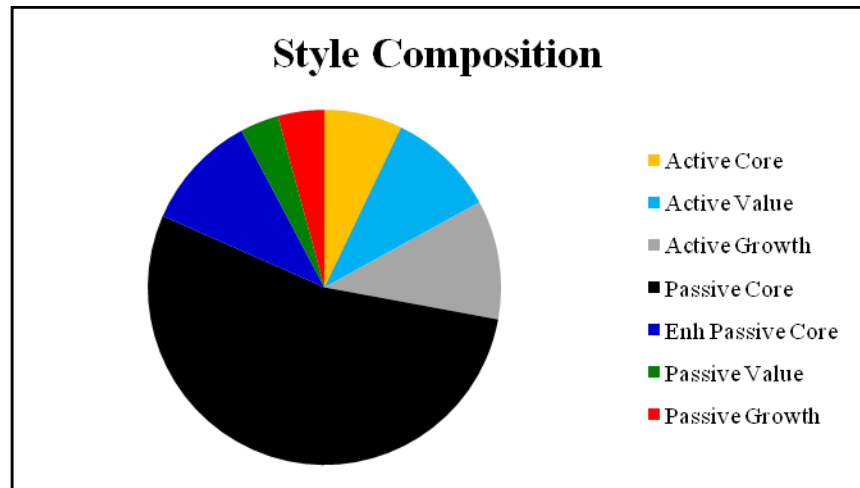
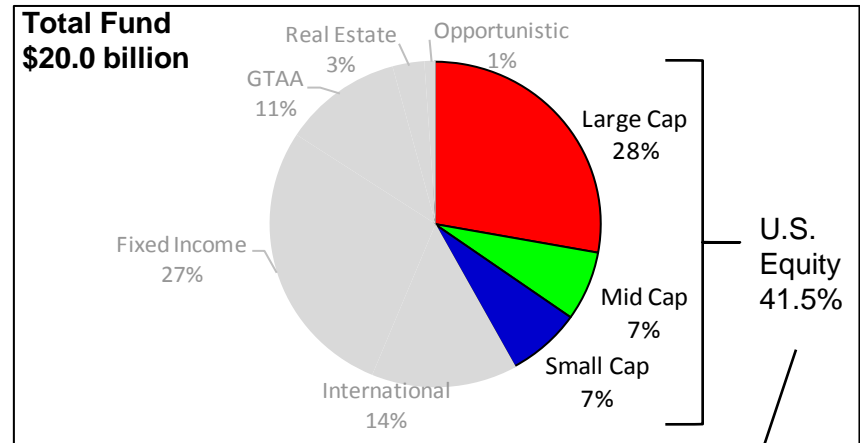
## U.S. Equity Asset Class

Gary R. Dokes, Chief Investment Officer  
Sarah Wadsworth, Senior Portfolio Analyst  
Terry A. Dennison, Mercer Investment Consulting

# ASRS U.S. Equity

## December 31, 2008

- Market Value: \$8.3b
- Passive Percent: 72%
- Active Style Composition:
  - Core: 26%
  - Growth: 39%
  - Value: 35%
- Portfolios:
  - 7 Passive
  - 10 Active:
    - Fundamental: 6
    - Quantitative: 4
- Average Fee: 14 bps



# ASRS U.S. Equity Managers

## Mandates Overview

### December 31, 2008

Manager	Mandate	Benchmark	Inception	Expected Alpha (bps)	Mgmt Fees (bps)	Portfolio Assets (\$mil)	Strategy Assets (\$mil)
<b>Active</b>							
Jacobs Levy	LC (120/20)	S&P 500	10/31/06	300	45-75	\$129	*\$3,000
INTECH	LC	S&P 500 Growth	12/31/02	350	37	\$547	\$18,333
LSV	LC	S&P 500 Value	12/31/02	200	29	\$394	\$15,500
Wellington	MC	S&P 400	6/30/02	300	54	\$262	\$5,332
CRM	MC	S&P 400 Value	12/31/03	300	55	\$94	\$4,700
Champlain	SC	S&P 600	12/31/07	200	85	\$94	\$1,640
TimesSquare	SC	Russell 2500 Growth (SMID)	3/31/05	215	82	\$304	\$2,236
CopperRock	SC	Russell 2500 Growth (SMID)	12/31/07	200	85	\$55	\$653
IronBridge	SC	Russell 2500 (SMID)	12/31/07	200	73	\$108	\$974
DFA	SC	S&P 600 Value	8/31/98	200	23	\$335	\$13,598

\* Jacobs Levy manages \$3.0 billion in Long/Short Strategies

# ASRS U.S. Equity Managers

## Mandates Overview

### December 31, 2008

Manager	Mandate	Benchmark	Inception	Expected Alpha (bps)	Mgmt Fees (bps)	Portfolio Assets (\$mil)	Strategy Assets (\$mil)
<b>Passive</b>							
ASRS E1	LC	S&P 500	9/30/95	25	1	\$884	N/A
ASRS E2	LC	S&P 500	3/31/97	5	1	\$2,672	N/A
BGI	LC	S&P 500	7/31/89	0	1	\$883	\$123,246
SSgA	MC	S&P 400	1/31/00	0	2	\$368	\$5,089
ASRS E3	MC	S&P 400 Growth	11/30/00	10	1	\$353	N/A
ASRS E4	MC	S&P 400 Value	6/30/02	10	1	\$291	N/A
ASRS E6	SC	S&P 600	2/1/07	10	1	\$543	N/A

# U.S. Equity Portfolio Review

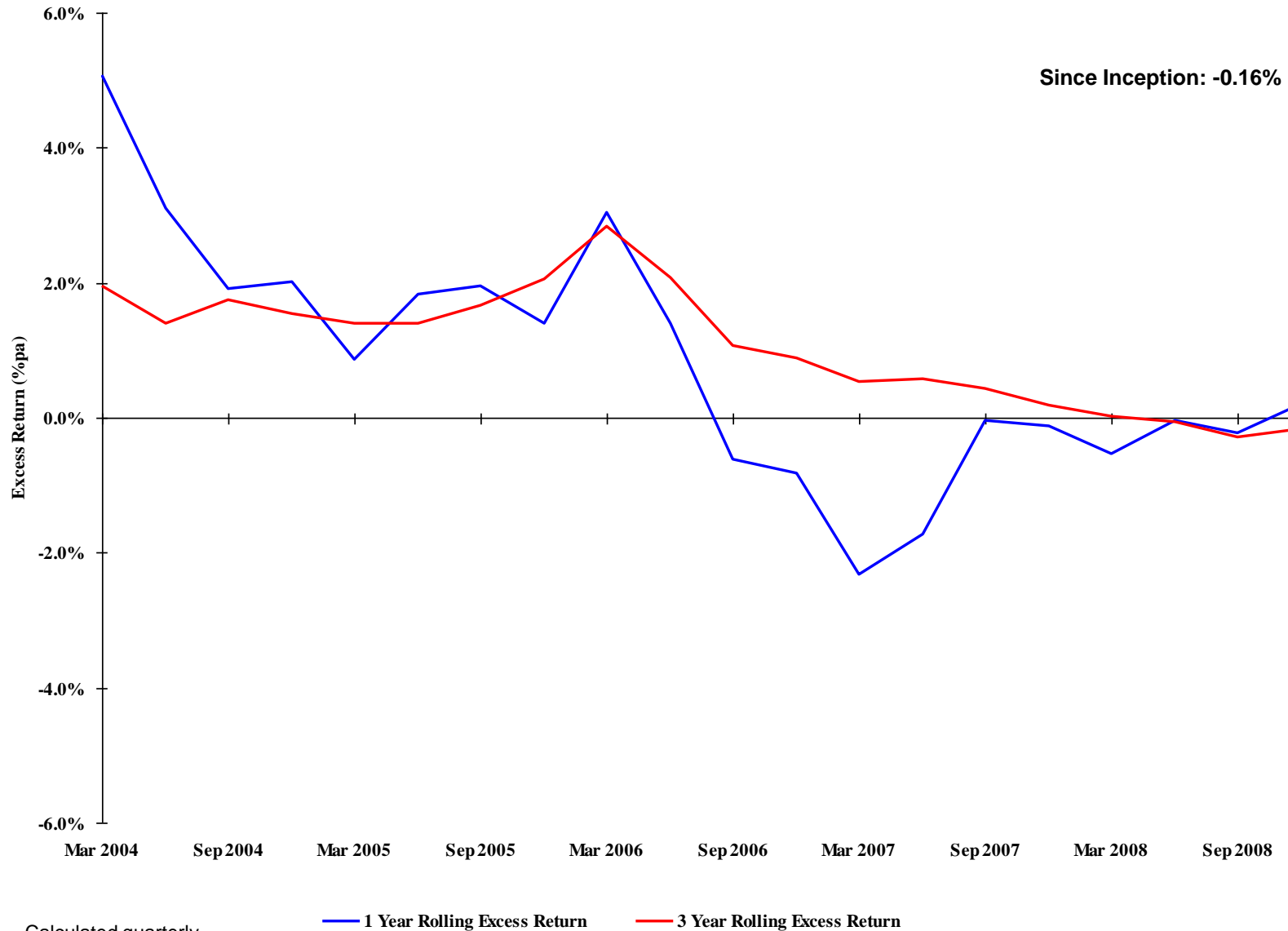
## Overview as of December 31, 2008

	Total			
	Growth	Core	Value	Total
Large	6.6%	54.9%	4.7%	66.2%
Mid	4.2%	7.6%	4.6%	16.5%
Small	4.3%	9.0%	4.0%	17.3%
Total	15.1%	71.5%	13.4%	100.0%

Manager Name	Assets under Management (in million)	% of Domestic Equity
<b>Active Large Cap Equity</b>		
Jacobs Levy Equity Mgmt. - Core	128.6	1.5%
INTECH - Growth	547.2	6.6%
LSV Asset Management - Value	393.6	4.7%
<b>Passive Large Cap Equity</b>		
Internally Managed ASRS E1 - Core	883.8	10.6%
Internally Managed ASRS E2 - Core	2,671.6	32.1%
Barclays Global Inv. Equity - Core	882.9	10.6%
<b>Total Large</b>	<b>5,507.7</b>	<b>66.2%</b>
<b>Active Mid Cap Equity</b>		
Wellington Mgmt Company - Core	261.7	3.1%
Cramer Rosenthal McGlynn - Value	93.6	1.1%
<b>Passive Mid Cap Equity</b>		
State Street Global Advisors - Core	368.1	4.4%
Internally Managed ASRS E3 - Growth	353.2	4.2%
Internally Managed ASRS E4 - Value	291.3	3.5%
<b>Total Mid</b>	<b>1,367.9</b>	<b>16.5%</b>
<b>Active Small Cap Equity</b>		
Champlain Investment Partners - Core	93.8	1.1%
TimesSquare Capital - Growth	303.5	3.7%
Copper Rock Capital - Growth	54.9	0.7%
IronBridge Capital - Core	107.9	1.3%
Dimensional Fund Advisors - Value	334.9	4.0%
<b>Passive Small Cap Equity</b>		
Internally Managed ASRS E6 - Core	543.0	6.5%
<b>Total Small</b>	<b>1,438.0</b>	<b>17.3%</b>
<b>Total</b>	<b>8,313.6</b>	<b>100%</b>

# Combined Domestic Equity (Net) vs. Com. Domestic Eq. Index

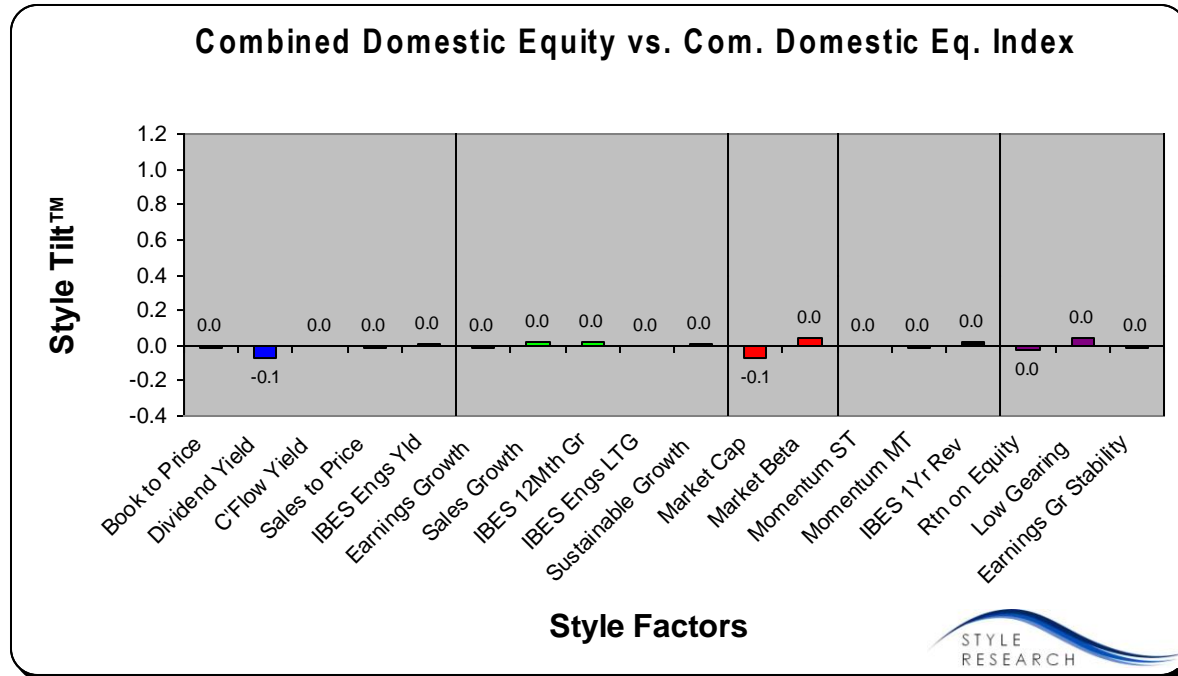
Excess Return in US Equity Combined from Mar 2004 to Dec 2008



# Positions: Style Analysis – Portfolio Style Skyline

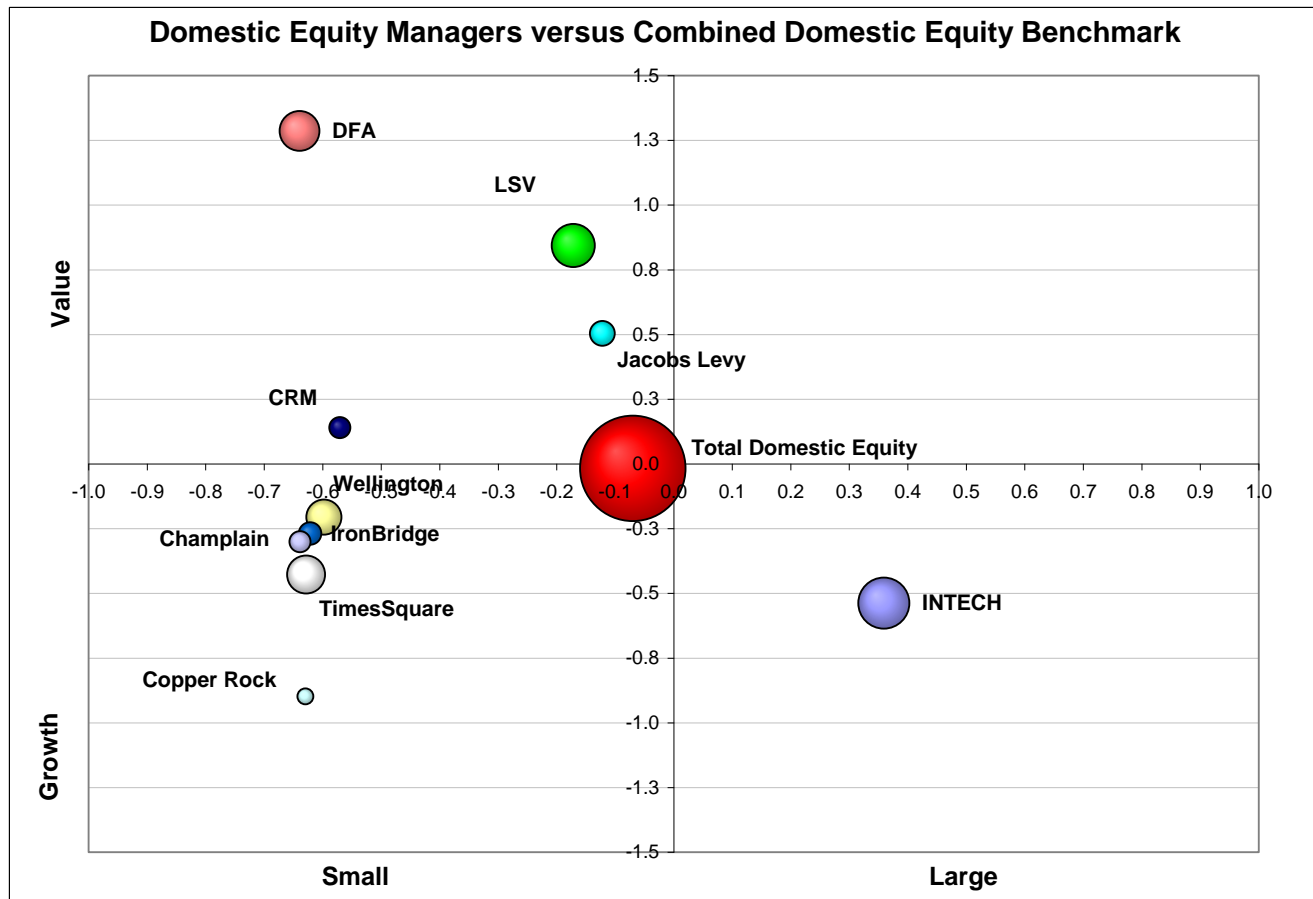
## U.S. Equity

### As of December 31, 2008



# Domestic Equity Portfolio Review

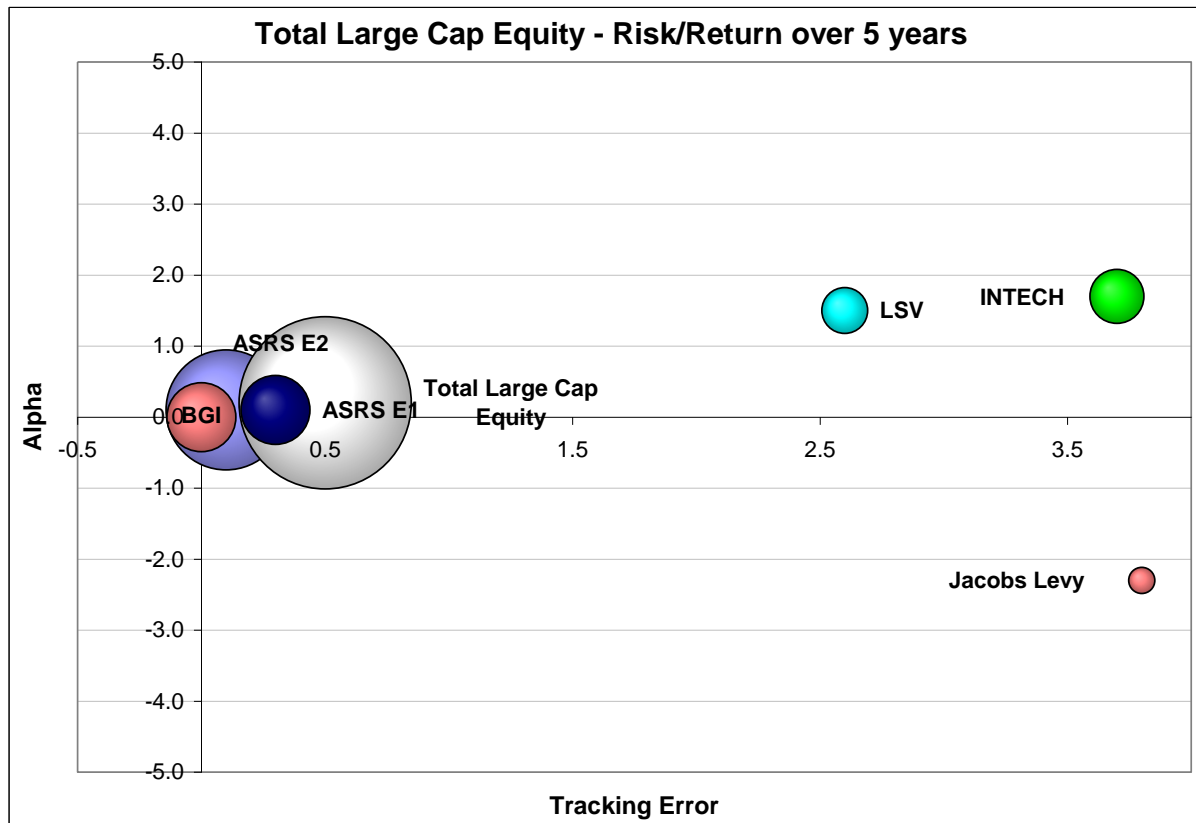
## Value/Growth vs. Market Cap – Snapshot as of December 31, 2008



Manager	Mkt Cap	Val- Grth	AUM (in MIL.)	Manager	Mkt Cap	Val- Grth	AUM (in MIL.)
DFA	-0.64	1.29	\$334.9	Champlain	-0.64	-0.30	\$93.8
Copper Rock	-0.63	-0.90	\$54.9	CRM	-0.57	0.14	\$93.6
TimesSquare	-0.63	-0.43	\$303.5	LSV	-0.17	0.84	\$393.6
Wellington	-0.60	-0.21	\$261.7	Jacobs Levy	-0.12	0.50	\$128.6
IronBridge	-0.62	-0.90	\$107.9	INTECH	-0.12	0.50	\$547.2
Total Domestic Equity	-0.07	-0.02	\$2,319.7				

# Risk/Return Bubble Chart

## ASRS U.S. Equity Large Cap Asset Class



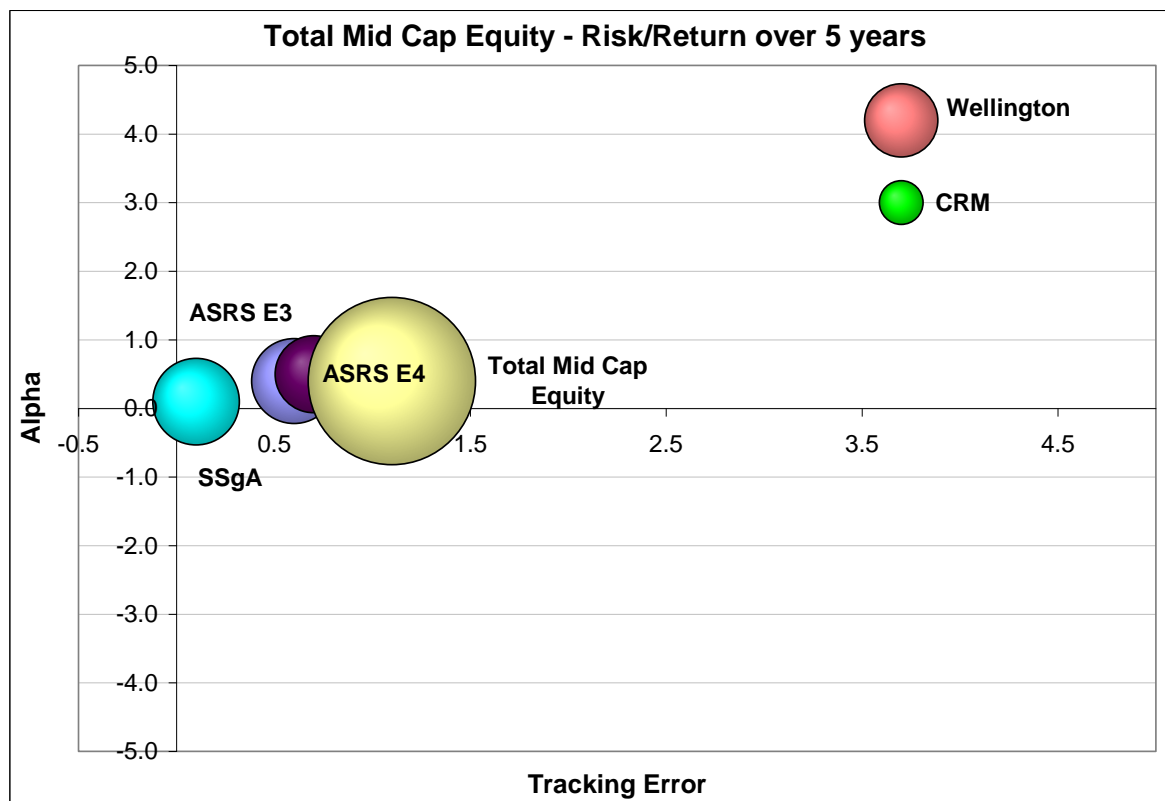
Manager	Portfolio Size	Inception	Alpha	Tracking Error	Information Ratio
Jacobs Levy	\$128.6	10/31/2006	-2.3	3.8	-0.6
INTECH	\$547.2	12/31/2002	1.7	3.7	0.5
LSV	\$393.6	12/31/2002	1.5	2.6	0.6
ASRS E1	\$883.8	9/30/1995	0.1	0.3	0.3
ASRS E2	\$2,671.6	3/31/1997	0.1	0.1	1.0
BGI	\$882.9	7/31/1989	0.0	0.0	0.0
<b>Total Large Cap Equity</b>	<b>\$5,507.7</b>	<b>6/30/2002</b>	<b>0.2</b>	<b>0.5</b>	<b>0.4</b>

Calculated quarterly and net. For managers with less than 5 years of performance, inception to date metrics have been provided

Jacobs Levy composite linked with ASRS history - composite inception date of July 2005

# Risk/Return Bubble Chart

## ASRS U.S. Equity Mid Cap Asset Class

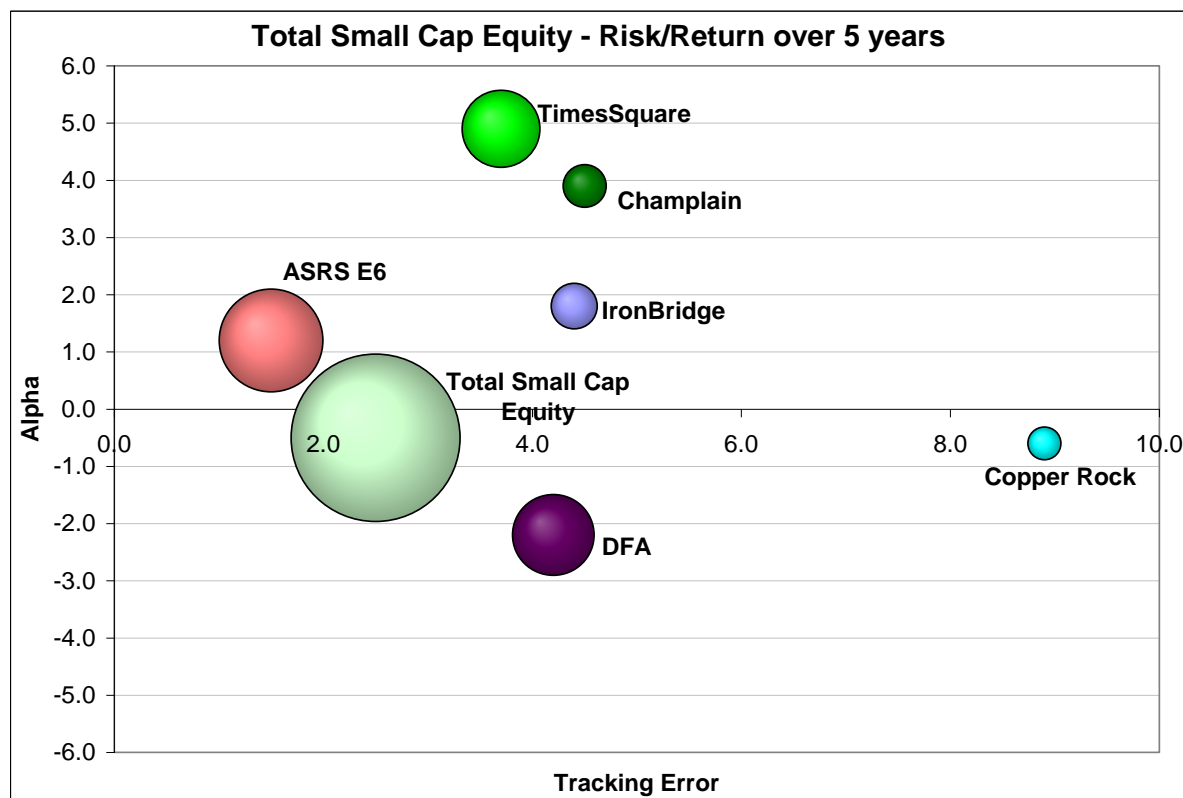


Manager	Portfolio Size	Inception	Alpha	Tracking Error	Information Ratio
Wellington	\$261.7	6/30/2002	4.2	3.7	1.1
CRM	\$93.6	12/31/2003	3.0	3.7	0.8
SSgA	\$368.1	1/31/2000	0.1	0.1	1.0
ASRS E3	\$353.2	11/30/2000	0.4	0.6	0.7
ASRS E4	\$291.3	6/30/2002	0.5	0.7	0.7
<b>Total Mid Cap Equity</b>	<b>\$1,367.9</b>	<b>6/30/2002</b>	<b>0.4</b>	<b>1.1</b>	<b>0.4</b>

Calculated quarterly and net.

# Risk/Return Bubble Chart

## ASRS U.S. Equity Small Cap Asset Class



Manager	Portfolio Size	Inception	Alpha	Tracking Error	Information Ratio
Champlain	\$93.8	12/31/2007	3.9	4.5	0.9
TimesSquare	\$303.5	3/31/2005	4.9	3.7	1.3
Copper Rock	\$54.9	12/31/2007	-0.6	8.9	-0.1
IronBridge	\$107.9	12/31/2007	1.8	4.4	0.4
DFA	\$334.9	8/31/1998	-2.2	4.2	-0.5
ASRS E6	\$543.0	2/1/2007	1.2	1.5	0.8
<b>Total Small Cap Equity</b>	<b>\$1,438.0</b>	<b>6/30/2002</b>	<b>-0.5</b>	<b>2.5</b>	<b>-0.2</b>

Calculated quarterly and net. For managers with less than 5 years of performance, inception to date metrics have been provided  
Champlain, Copper Rock, and IronBridge Composites are linked with ASRS history. Champlain Composite inception – January 1996;  
Copper Rock Composite inception – July 2005; IronBridge Composite inception – April 2004

# ASRS U.S. Equity Managers

## Mercer Ratings

### December 31, 2008

**Mercer ratings signify Mercer’s opinion as to an investment strategy’s prospect for outperforming a suitable benchmark, on a risk-adjusted basis, over a full market cycle.**

Manager	Strategy	Mercer Rating	Rating Date
Jacobs Levy	120/20	A	4/17/2008
INTECH	Growth	A	11/25/2008
LSV	Value	A-	8/22/2008
Wellington	Core	A	12/15/2008
CRM	Value	A (T)	12/15/2008
Champlain	Core	A	2/5/2008
TimesSquare	SMID Growth	A	8/21/2008
CopperRock	SMID Growth	A	5/21/2008
IronBridge	SMID	A	7/21/2008
DFA	Value	A-	4/24/2008

“A” Rated Strategies are assessed as having above average prospects.

“B” Rated Strategies are assessed as having average prospects.

“C” Rated Strategies are assessed as having below average prospects.

“A-” and “B+” are intermediate categories in between “A” and “B” ratings.

“B-” is an intermediate category in between “B” and “C” ratings.

“N” Rated Strategies are not currently rated by Mercer.

“(T)” Indicates Strategy also has above average tracking error

# Jacobs Levy Equity Management

## Mercer Manager Review

Jacobs Levy Equity Management – Domestic Equity – Large Cap 120/20		
Factor	Rating (-, =, + or ++)	Comments
Idea Generation	++	<p>JLEM is a leading quantitative manager that relies heavily on original theoretical research into disentangling stock returns. Bruce Jacobs and Ken Levy are two of the most prominent practitioners in the industry, and continue to be instrumental in the generation of new ideas and refining old ones. The pair laid groundwork for enhanced active strategies in original research that dates back to 1998 and the uniform process employed optimizes both long and short positions simultaneously to get the full benefit of the firm's insights. The firm continually evolves its process and has fully integrated every step in the decision-making from idea generation to implementation. JLEM's trading operations are fully integrated into portfolio construction, which we consider a strength of this process. The firm has done a smart job in limiting its client base and growing slowly.</p> <p>The strategy performs best in market environments led by company fundamentals.</p>
Portfolio Construction	+	
Implementation	++	
Business Management	+	
<b>Overall Rating</b>	<b>A</b>	
Rating Date	4/17/2008	

# INTECH

## Mercer Manager Review

INTECH – Active Large Cap Growth Equity – Large Cap Growth		
Factor	Rating (-, =, + or ++)	Comments
Idea Generation	++	<p>INTECH's process differs from traditional quantitative approaches by incorporating a combination of academic and investment experiences to create portfolios entirely based on scientific and mathematical research spearheaded by Dr. Robert Fernholz. Because fundamental variables are absent from the process, the researchers have the luxury of conducting deep theoretical research and fully dedicating their time to enhancing the model and the risk management tools associated with portfolio construction. We believe the academic talents and insights of the research team, coupled with its collaborative culture, are strengths. In addition, the team's proprietary trading systems facilitate transaction cost management and increase the flexibility of implementing trades.</p> <p>Because the process tends to favor smaller-cap names that demonstrate greater relative volatility, environments in which returns are more concentrated in larger-cap stocks tend to create headwinds for the strategy. Due to the risk-controlled nature of the process, the performance for the strategy is not expected to deviate significantly from the benchmark in either up or down markets but rather approximate its intended alpha target over time.</p>
Portfolio Construction	+	
Implementation	+	
Business Management	+	
<b>Overall Rating</b>	<b>A</b>	
Rating Date	11/25/2008	

# LSV Asset Management Mercer Manager Review

LSV Asset Management – Active Large Cap Value Equity – Large Cap Value		
Factor	Rating (-, =, + or ++)	Comments
Idea Generation	++	<p>LSV's quantitative models combine traditional fundamental factors with a behavioral finance overlay. As such, the strength of the strategy is that it avoids judgmental biases and behavioral weaknesses. LSV has current and former professors on staff from some of the nation's top business schools, and the firm has the opportunity to see vast amounts of both published and unpublished research. The team's model is robust and ideas are thoroughly vetted before making changes to the model. The firm is highly reliant on Lakonishok's reach into the academic community, and we are concerned that little consideration has been given to creating a succession plan, which slightly lowers our rating on the strategy.</p>
Portfolio Construction	+	
Implementation	+	
Business Management	=	
<b>Overall Rating</b>	<b>A-</b>	
Rating Date	8/22/2008	<p>Relative to its benchmark, the product will consistently have a style bias toward deeper value and typically has a capitalization bias toward smaller names. LSV is expected to underperform its peers and the benchmark when its size and style biases are severely out of favor.</p>

# Wellington

## Mercer Manager Review

Wellington – Active Mid Cap Core Equity – Mid Cap Opportunities		
Factor	Rating (-, =, + or ++)	Comments
Idea Generation	++	The Mid Cap Opportunities product is a core strategy that may exhibit a growth bias given its focus on demographic or market themes exhibiting strong growth. The strengths of the strategy include the experience and caliber of Perelmutter and the philosophy and process which focuses on high quality, established mid cap companies with strong fundamentals. Perelmutter is a relatively small fish in Wellington's research pond, but he commands enough attention with the firm's research team to be the recipient of its best names. In addition to the strength of the strategy's investment team, the cadre of global industry analysts at Wellington provides the team with ample support whenever it is necessary.
Portfolio Construction	+	
Implementation	+	
Business Management	+	
<b>Overall Rating</b>	<b>A</b>	
Rating Date	12/15/2008	Given its investment philosophy and focus on demographic or market themes that exhibit strong growth, clients should be aware that the portfolio may exhibit a growth bias at times.

# CRM

## Mercer Manager Review

<b>Cramer Rosenthal McGlynn – Active Mid Cap Value Equity – Mid Cap Value Equity</b>		
<b>Factor</b>	<b>Rating</b> (-, =, + or ++)	<b>Comments</b>
Idea Generation	++	Cramer Rosenthal McGlynn possesses a deep, experienced research team that serves as the central framework to a disciplined investment management process. We view its intensive fundamental research as a key strength and believe the analysts' collaboration amongst sector teams allows for comprehensive coverage of industries and leads to a structure where ideas are thoroughly challenged. In addition, we are impressed by the investment caliber of co-portfolio managers Abramson and Rewey, whose differentiated insights add to our confidence in the strategy's ability to outperform. The team's incorporation of risk buckets, in an effort to actively monitor the portfolio's risk exposures from multiple perspectives, delivers another element to the robustness of the research process.
Portfolio Construction	+	
Implementation	+	
Business Management	+	
<b>Overall Rating</b>	<b>A (T)</b>	We expect the strategies to hold up well in down markets given the team's emphasis on valuation but struggle in market environments driven by few sectors.
Rating Date	12/15/2008	

# Champlain Investment Partners

## Mercer Manager Review

Champlain Investment Partners – Active Small Cap Core Equity – Small Cap		
Factor	Rating (-, =, + or ++)	Comments
Idea Generation	++	Although Small Cap Equity is a team-managed product, Brayman is clearly the driving force. The team's rigid adherence to its Warren Buffett-like philosophy of investing in good companies with strong cash flows and defensible competitive positions at reasonable prices is simple but effective across all capitalizations. The investment process, which is logical and risk-controlled, has elements of both growth and value investing. The firm's thoughtful and distinctive investment approach is especially noteworthy for the simple and logical customizations made for each sector. The firm's location and ownership structure result in a cohesive work environment and no staff turnover.
Portfolio Construction	+	
Implementation	+	
Business Management	+	
<b>Overall Rating</b>	<b>A</b>	
Rating Date	2/5/2008	The team's focus on higher quality and more stable companies results in a portfolio having little micro-cap exposure. The strategy can be expected to outperform its benchmark and peers when the market favors higher quality and more established companies, and lag when speculative issues and micro-caps are in favor.

# TimesSquare Capital Mercer Manager Review

TimesSquare Capital (TSCM) – Active Small + Mid Cap Growth Equity – SMID Cap Growth		
Factor	Rating (-, =, + or ++)	Comments
Idea Generation	++	We continue to have a favorable opinion of TSCM's growth equity strategies led by Babyak, Rosenthal and Duca. They are exceptional portfolio managers and drive the consistent application of TSCM's investment approach. The analyst team is solid and its fundamental research is a strength of the strategy. The portfolio is managed in a risk-controlled fashion and the team is well aware of the portfolio's exposures at all times. The experience and stability of the investment team, combined with a like-minded focus on finding growing companies with a competitive advantage, give us confidence in TSCM as a lead traditional growth manager.
Portfolio Construction	+	
Implementation	+	
Business Management	+	
<b>Overall Rating</b>	<b>A</b>	
Rating Date	8/21/2008	The strategies tend to exhibit less tracking error than many of their respective peers, and we would expect that behavior to continue given the sufficiently large number of names owned and a general lack of outsized sector bets. Those traits should appeal to clients seeking a traditional, diversified growth strategy. However, performance may lag in more speculative, momentum driven markets.

# Copper Rock Mercer Manager Review

Copper Rock Capital Partners – Active Small + Mid Cap Growth Equity – SMID Cap Growth		
Factor	Rating (-, =, + or ++)	Comments
Idea Generation	++	Clients looking for an intensive, research driven, bottom-up manager that invests in traditional growth names should be comfortable with CRCM. All members of the team look for the same blueprint when scouring the equity universe to find companies with strong, sustainable growth over a 12 to 18 month period. The team does a thorough job of understanding both the risks and the opportunities underlying each name in the portfolio. We believe that the combination of relative valuation while looking for stronger earnings growth, a unique diversification strategy, and CRCM's "no excuses" sell discipline, results in a traditional growth portfolio that shines above its peers.
Portfolio Construction	+	
Implementation	+	
Business Management	+	
<b>Overall Rating</b>	<b>A</b>	
Rating Date	5/21/2008	

# IronBridge Capital Management

## Mercer Manager Review

IronBridge Capital Management – Active Small + Mid Cap Core Equity – SMID Cap Core		
Factor	Rating (-, =, + or ++)	Comments
Idea Generation	++	<p>We view the strength of the approach as a combination of the investment team's research capabilities and the life cycle diversification used in portfolio construction. The process relies heavily on the CFROI framework to evaluate securities quantitatively. However, investment decisions are made by the investment team applying its unique understanding of these models gained while working at Holt. The system allows the team to track every decision point over time and aggregates the team's intellectual capital on every stock into a single location for easy reference. This increases the efficiency and effectiveness of the team's decision making process. The firm's use of the life cycle diversification requirement in the construction of the portfolio is also a strength.</p> <p>The portfolio will typically have a slight growth bias, but will always have a larger market cap tilt. The life cycle diversification should help the product participate in value and growth markets, but the product should excel when the market rewards cashflow.</p>
Portfolio Construction	++	
Implementation	=	
Business Management	+	
<b>Overall Rating</b>	<b>A</b>	
Rating Date	7/21/2008	

# Dimensional Fund Advisors

## Mercer Manager Review

Dimensional Fund Advisors – Active Small Cap Value Equity – Small Cap Value		
Factor	Rating (-, =, + or ++)	Comments
Idea Generation	++	<p>DFA is a leader in managing small cap portfolios and its investment processes are rooted in the theories of top academic researchers in finance who are directly affiliated with the firm. The beliefs underpinning the firm's approach are sound and applied consistently to the strategy. By incorporating representatives from research, portfolio management, and trading in the investment process, DFA creates a direct linkage between research and portfolio management and helps ensure that the firm's best thinking is quickly and efficiently implemented into the portfolio. One note of caution is that small cap assets under management have grown to where liquidity is a concern. Clients must have a long time horizon for entry and exit from this investment.</p> <p>The Small Cap Value strategy displays a strong bias to value factors and a tilt to the lower end of the size spectrum, even within the small cap universe. As a result, the strategy can be expected to do well when investors have a higher appetite for risk and lag in "flight to quality" markets.</p>
Portfolio Construction	++	
Implementation	=	
Business Management	+	
<b>Overall Rating</b>	<b>A-</b>	
Rating Date	4/24/2008	

# **U.S. Equity Large Cap Manager Reviews (Individual)**

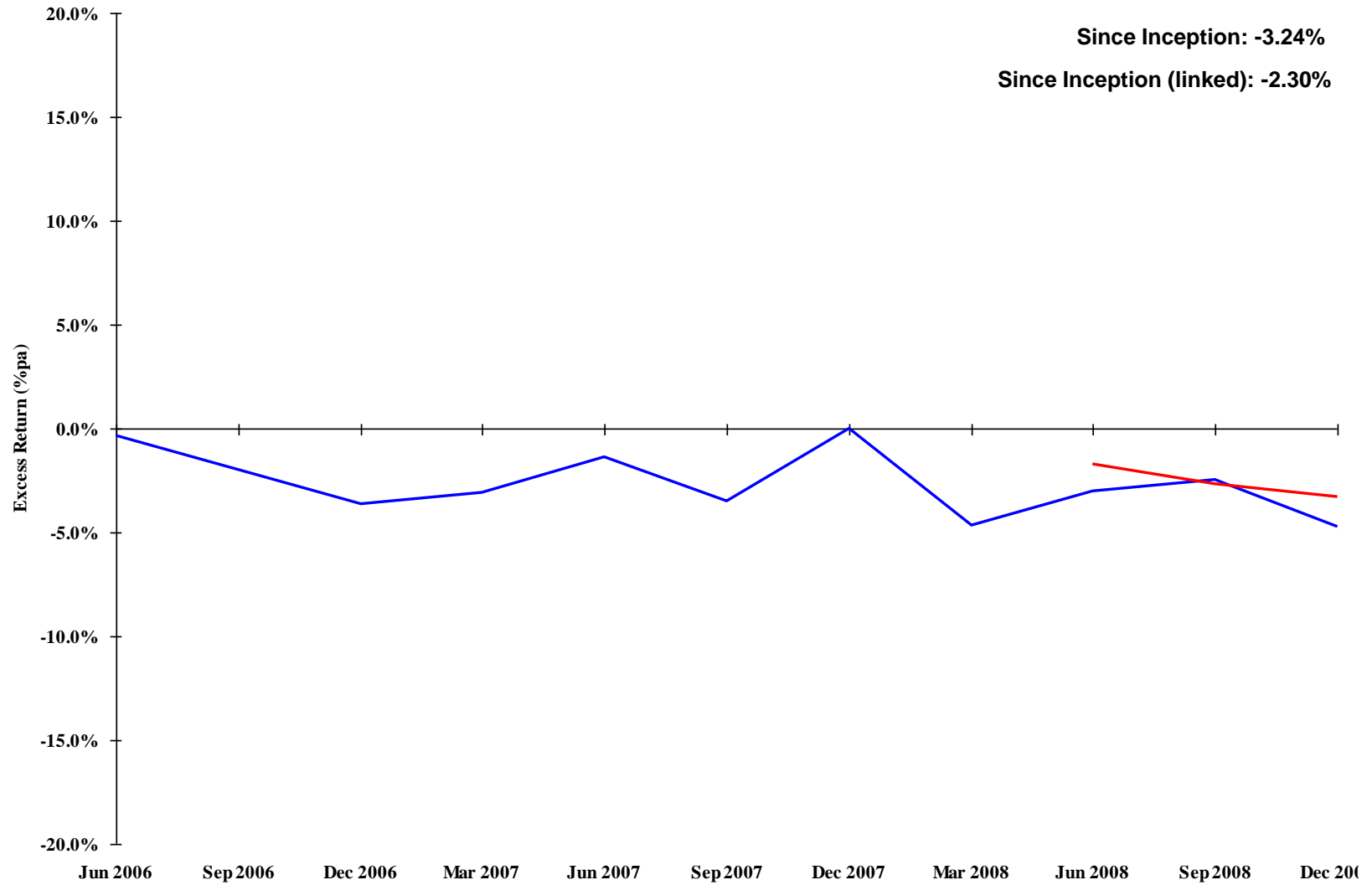
# Jacobs Levy

## Qualitative Factors

Factors	Description
People	<ul style="list-style-type: none"> <li>• Jacobs Levy is an independent investment firm. Principals Bruce Jacobs and Ken Levy founded the firm in 1986 and serve as co-portfolio managers and co-directors of research</li> <li>• The research team is composed of four senior Ph.D. researchers and 12 Investment Systems Analysts with advanced degrees, including three with Ph.D. degrees.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>• Believe market inefficiencies can be detected and exploited by “disentangling” stock returns to find true sources of alpha.</li> <li>• Believe one must maintain a dynamic and forward looking approach</li> </ul>
Process	<ul style="list-style-type: none"> <li>• Models look at prices, company information, economic conditions and investors’ human behavior.</li> <li>• Long-short investing permits more meaningful security under- and overweights</li> <li>• Optimizer integrates the long and short positions relative to benchmark weights, accounts for hard to borrow stocks and actively limits the downside on short positions.</li> <li>• Sophisticated trading techniques and capacity constraints minimize transaction costs.</li> <li>• No leverage is used to obtain market exposure; short sales pay for additional longs; longs serve as collateral for shorts.</li> <li>• Broadly diversified across stocks, market inefficiencies and sectors</li> </ul>

# Jacobs Levy 120/20 Linked (Net) vs. S&P 500

Excess Return in US Equity Large Cap Equity from Jun 2006 to Dec 2008



Calculated quarterly  
Jacobs Levy Composite linked with ASRS history

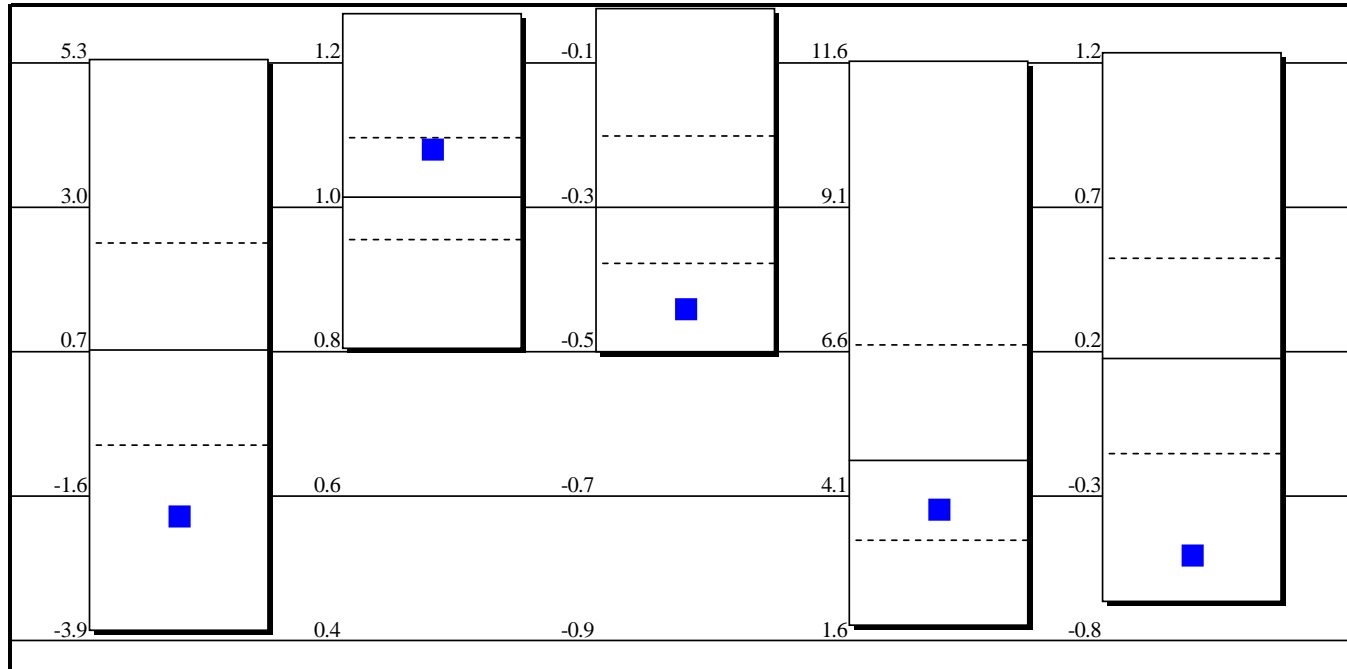
— 1 Year Rolling Excess Return

— 3 Year Rolling Excess Return

# Jacobs Levy 120/20 Linked (Gross)

## Comparison with the Mercer US Equity Large Cap Equity Universe

Risk and Return Characteristics (calculated quarterly) versus S&P 500 for the period from Sep 2005 to Dec 2008

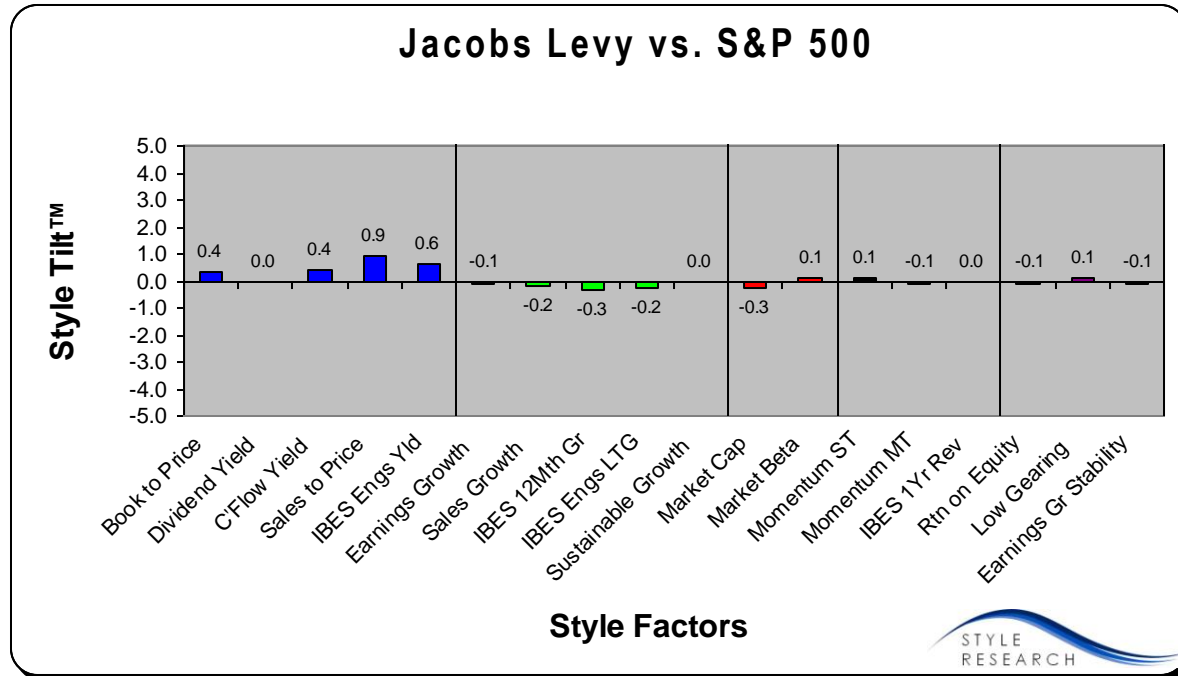


	Excess Return (% pa)	Beta	Reward to Risk	Tracking Error (% pa)	Information Ratio
JLgross	-1.9 (87)	1.1 (29)	-0.4 (87)	3.8 (65)	-0.5 (91)
5th Percentile	5.3	1.3	0.0	11.6	1.2
Upper Quartile	2.4	1.1	-0.2	6.7	0.5
Median	0.7	1.0	-0.3	4.7	0.2
Lower Quartile	-0.8	1.0	-0.4	3.3	-0.2
95th Percentile	-3.8	0.8	-0.5	1.8	-0.7
Number of Funds	948	948	948	948	948

# Positions: Style Analysis – Portfolio Style Skyline

## Jacobs Levy 120/20 Strategy

### As of December 31, 2008



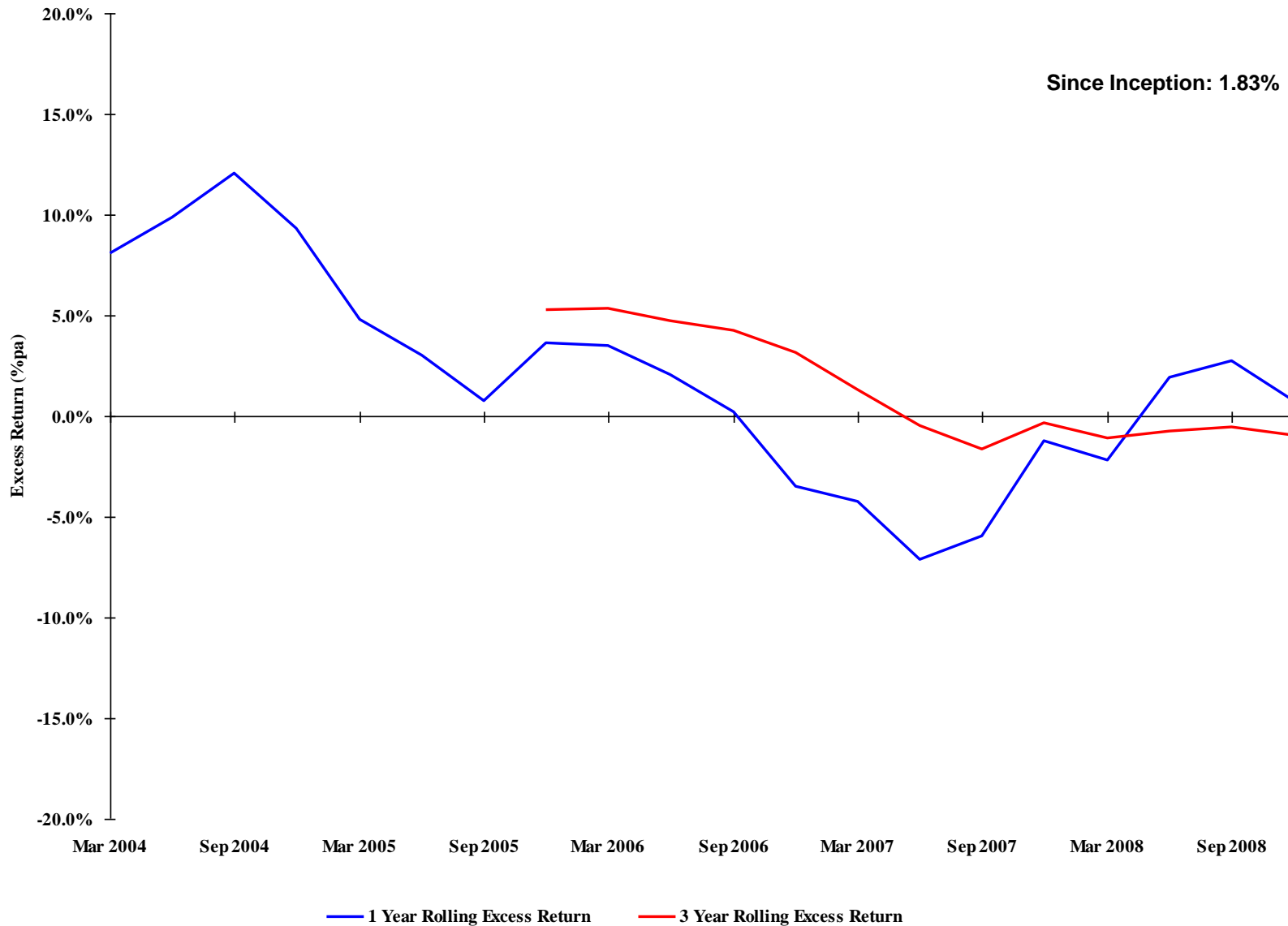
# INTECH

## Qualitative Factors

Factors	Description
People	<ul style="list-style-type: none"> <li>• Key functions have at least two people assigned, so there will always be back up in the event of a loss of a person. All portfolios are managed on a team basis.</li> <li>• Due to the mathematical nature of INTECH's strategies, no traditional portfolio managers, research analysts or traders are employed.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>• Based on the research of Dr. Robert Fernholz, INTECH believes that by combining securities with high relative volatility, but low covariance, more efficient portfolios can be constructed.</li> </ul>
Process	<ul style="list-style-type: none"> <li>• INTECH seeks to re-weight the benchmark index to a more efficient combination.</li> <li>• Utilize the relative volatility of stock prices to attempt to capture excess return as opposed to predicting alpha.</li> <li>• The only input to the investment process is historical stock price. The investment process attempts to combine stocks with high relative volatility and low correlation in target weightings in a portfolio designed to provide excess return while minimizing risk.</li> <li>• Optimization and rebalancing is key to maintaining weights over time.</li> <li>• All research is oriented towards mathematical finance and its application to portfolio management and system improvements.</li> </ul>

# INTECH (Net) vs. Large Cap Growth Blended Benchmark

Excess Return in US Equity Large Cap Growth from Mar 2004 to Dec 2008

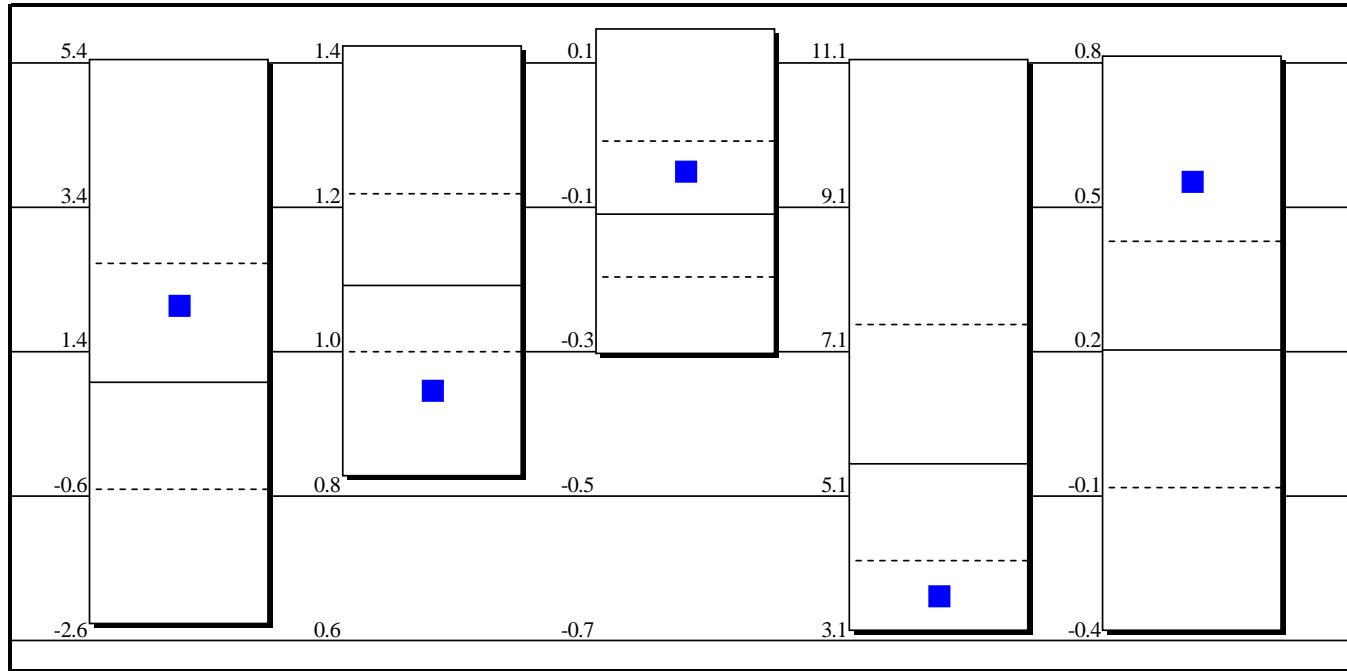


Calculated quarterly

# INTECH (Gross)

## Comparison with the Mercer US Equity Large Cap Growth Universe

Risk and Return Characteristics (calculated quarterly) versus LCG Idx for the period from Mar 2004 to Dec 2008

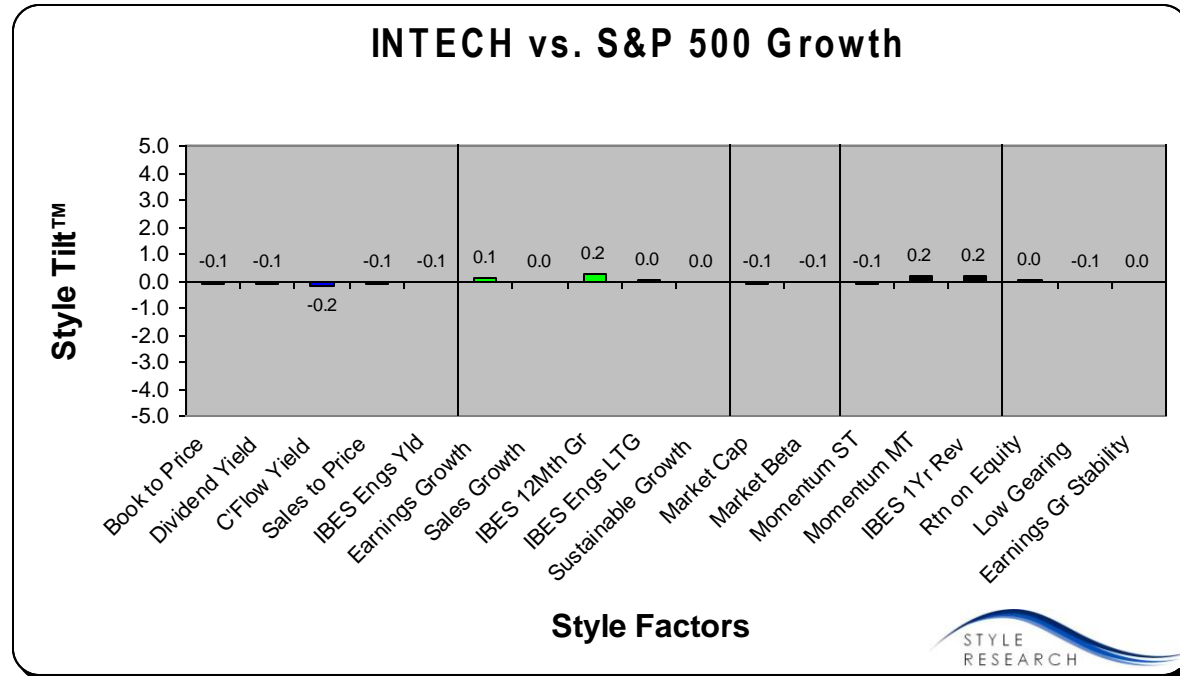


	Excess Return (% pa)	Beta	Reward to Risk	Tracking Error (% pa)	Information Ratio
INTECH	2.0 (34)	0.9 (85)	-0.1 (35)	3.7 (86)	0.6 (16)
5th Percentile	5.4	1.4	0.1	11.1	0.8
Upper Quartile	2.6	1.2	0.0	7.5	0.4
Median	1.0	1.1	-0.1	5.5	0.2
Lower Quartile	-0.5	1.0	-0.2	4.2	-0.1
95th Percentile	-2.4	0.8	-0.3	3.2	-0.4
Number of Funds	250	250	250	250	250

# Positions: Style Analysis – Portfolio Style Skyline

## INTECH LCG

### As of December 31, 2008



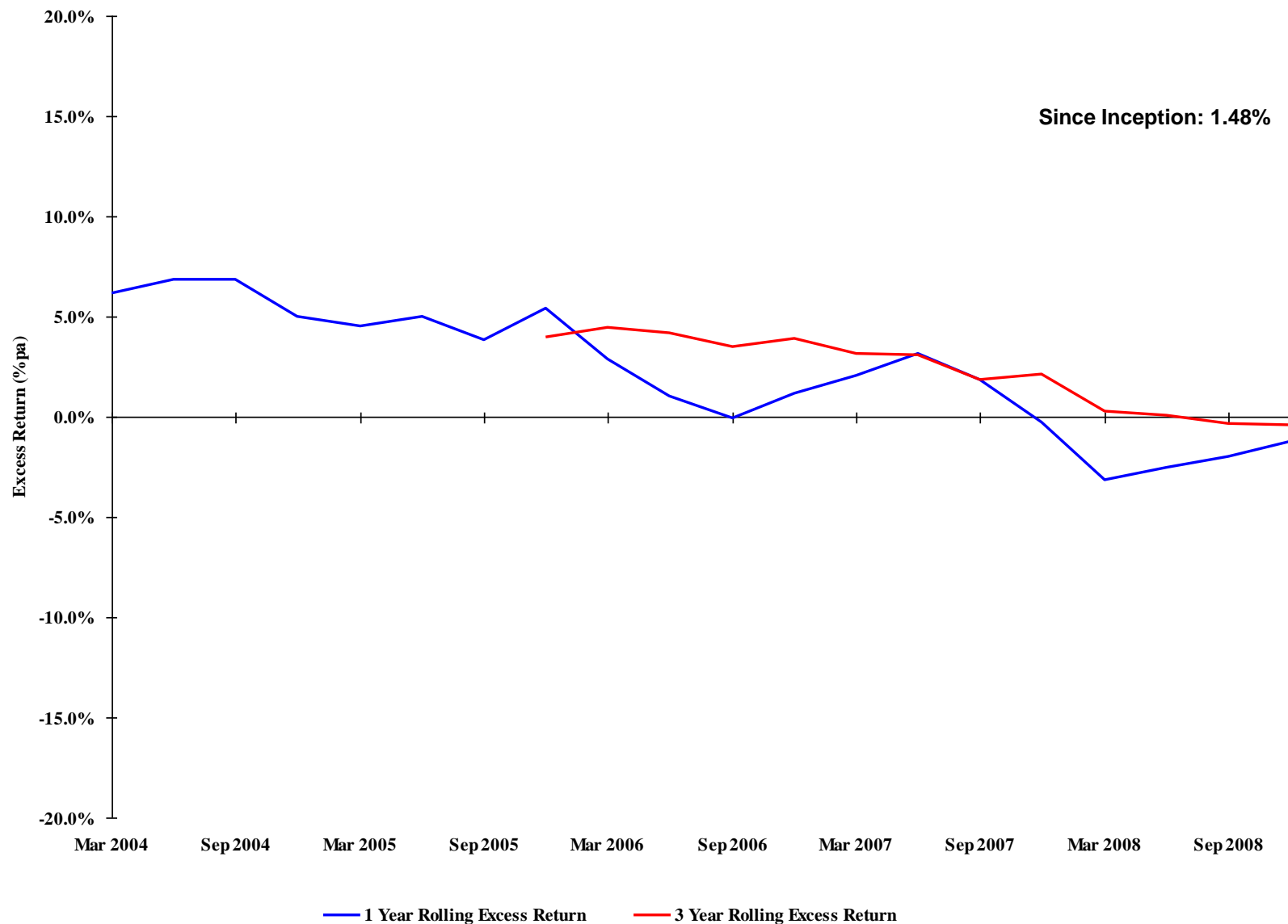
# LSV Asset Management

## Qualitative Factors

Factors	Description
People	<ul style="list-style-type: none"> <li>• No turnover in investment management team</li> <li>• The same team of academics and quantitative analysts is responsible for managing all value equity portfolios.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>• Based on original academic research in behavioral finance, LSV believes markets are inefficient as investors tend to extrapolate past performance too far into the future.</li> </ul>
Process	<ul style="list-style-type: none"> <li>• Quantitative approach ranks stocks on fundamental measures of value, past performance and indicators of near-term potential.</li> <li>• Portfolio is optimized to ensure the portfolio is broadly diversified across industries and companies.</li> <li>• Control tracking error relative to the benchmark by maintaining strict buy/sell criteria.</li> <li>• Deep value orientation.</li> <li>• The competitive strength of this strategy is that it avoids introducing to the process any judgmental biases and behavioral weaknesses that often influence investment decisions.</li> </ul>

# LSV (Net) vs. Large Cap Value Blended Benchmark

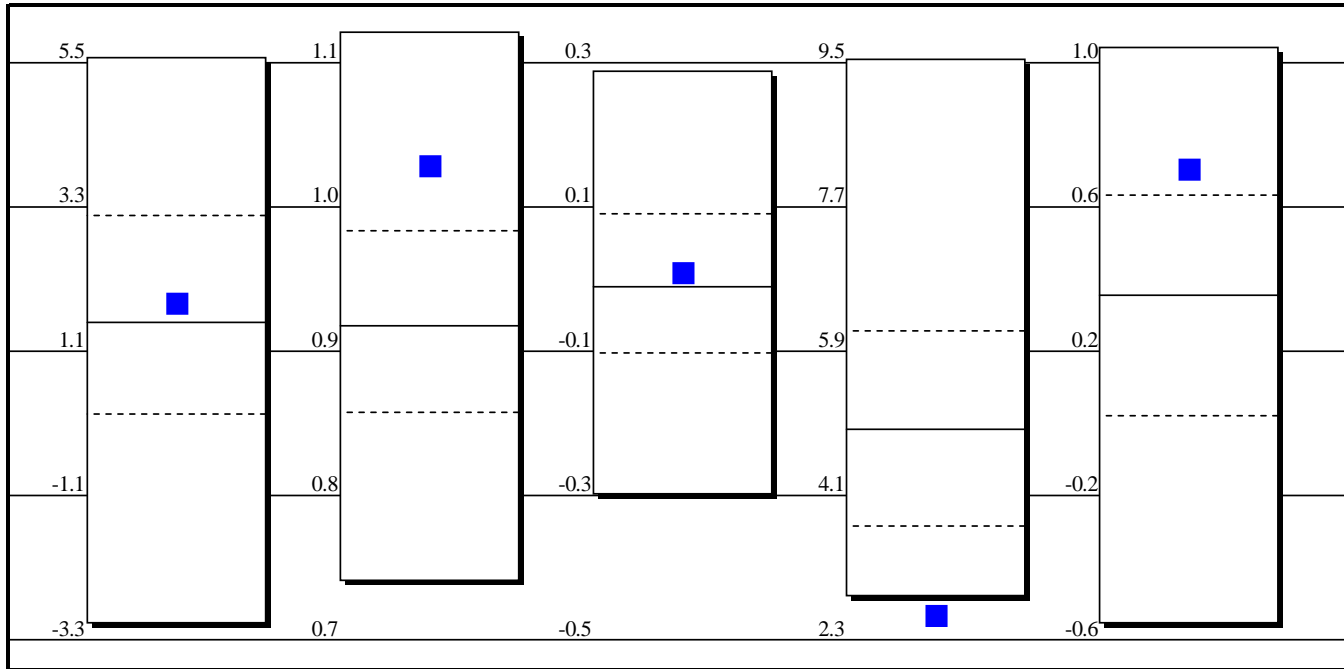
Excess Return in US Equity Large Cap Value from Mar 2004 to Dec 2008



Calculated quarterly

# LSV (gross)

**Comparison with the Mercer US Equity Large Cap Value Universe**  
**Risk and Return Characteristics (calculated quarterly) versus LCV Idx for the period from Mar 2004 to Dec 2008**

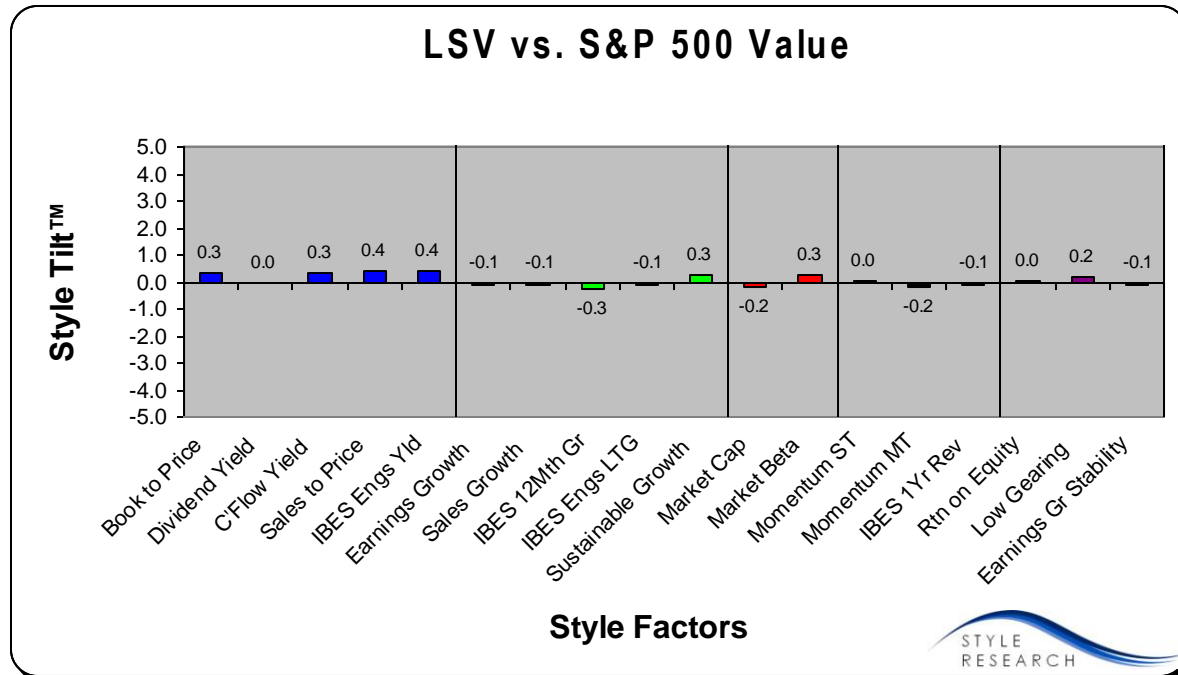


	Excess Return (% pa)	Beta	Reward to Risk	Tracking Error (% pa)	Information Ratio
LSV ■	1.8 (47)	1.0 (16)	0.0 (47)	2.6 (98)	0.7 (20)
5th Percentile	5.6	1.1	0.3	9.5	1.0
Upper Quartile	3.2	1.0	0.1	6.1	0.6
Median	1.5	0.9	0.0	4.9	0.4
Lower Quartile	0.1	0.9	-0.1	3.7	0.0
95th Percentile	-3.1	0.7	-0.3	2.8	-0.6
Number of Funds	298	298	298	298	298

# Positions: Style Analysis – Portfolio Style Skyline

## LSV Asset Management

### As of December 31, 2008



# **U.S. Equity Mid Cap Manager Reviews (Individual)**

# Wellington

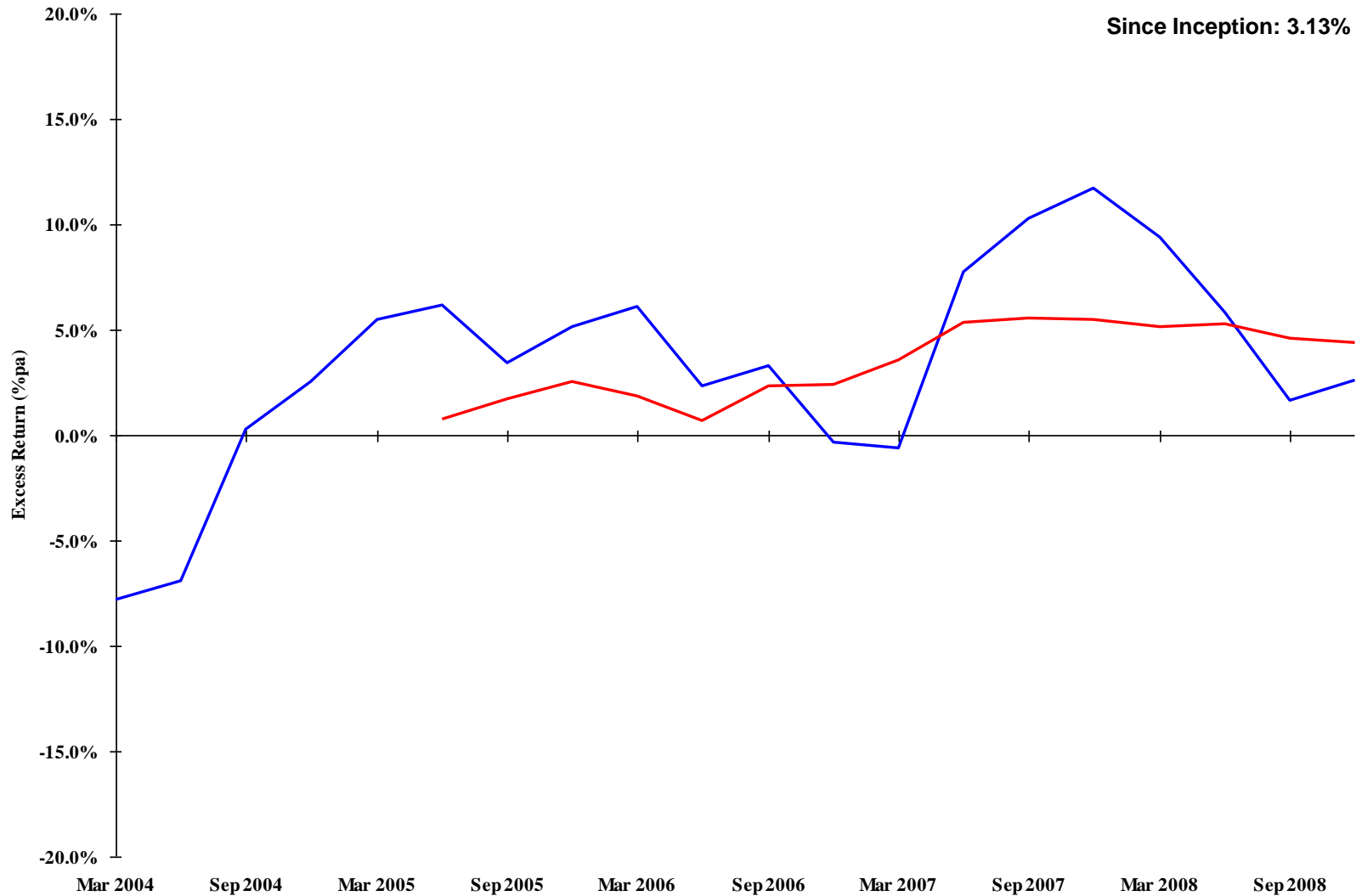
## Qualitative Factors

Factors	Description
People	<ul style="list-style-type: none"> <li>• Portfolio manager, Phil Perelmuter, is a key strength to the product and has been with Wellington since 1995.</li> <li>• Perelmuter is backed by a back-up portfolio manager, dedicated Mid Cap Opportunities team analysts, and the broad resources of Wellington, including the Global Industry Analysts.</li> <li>• Stable team of Global Industry Analysts average 17 years experience; 8 years with Wellington.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>• Wellington believes investing in high quality, established mid cap companies with good balance sheets, strong management teams and market leadership within their respective industry can lead to superior performance over time.</li> <li>• The portfolio seeks to meet 3 imperatives: quality, diversification and purity.</li> </ul>
Process	<ul style="list-style-type: none"> <li>• Investment ideas are generated from the team, analysts and bottom-up research. In this process, themes and trends that create tailwinds for portfolio holdings are often identified.</li> <li>• Will typically buy a stock when it is determined upside potential is twice the downside risk.</li> <li>• Look for names with accelerating revenue growth, accelerating earnings growth, high market share, quality balance sheets, and strong management teams at attractive valuations.</li> <li>• Portfolio consists of a mix of ‘core’ and ‘opportunistic’ holdings. ‘Opportunistic’ holdings can be statistically cheap, but possess short term catalysts over the next 6-12 months.</li> <li>• A mid cap core portfolio, the portfolio will demonstrate a slight growth bias at times.</li> </ul>

# Wellington (Net) vs. S&P 400

## Excess Return in US Equity Mid Cap Core from Mar 2004 to Dec 2008

Since Inception: 3.13%



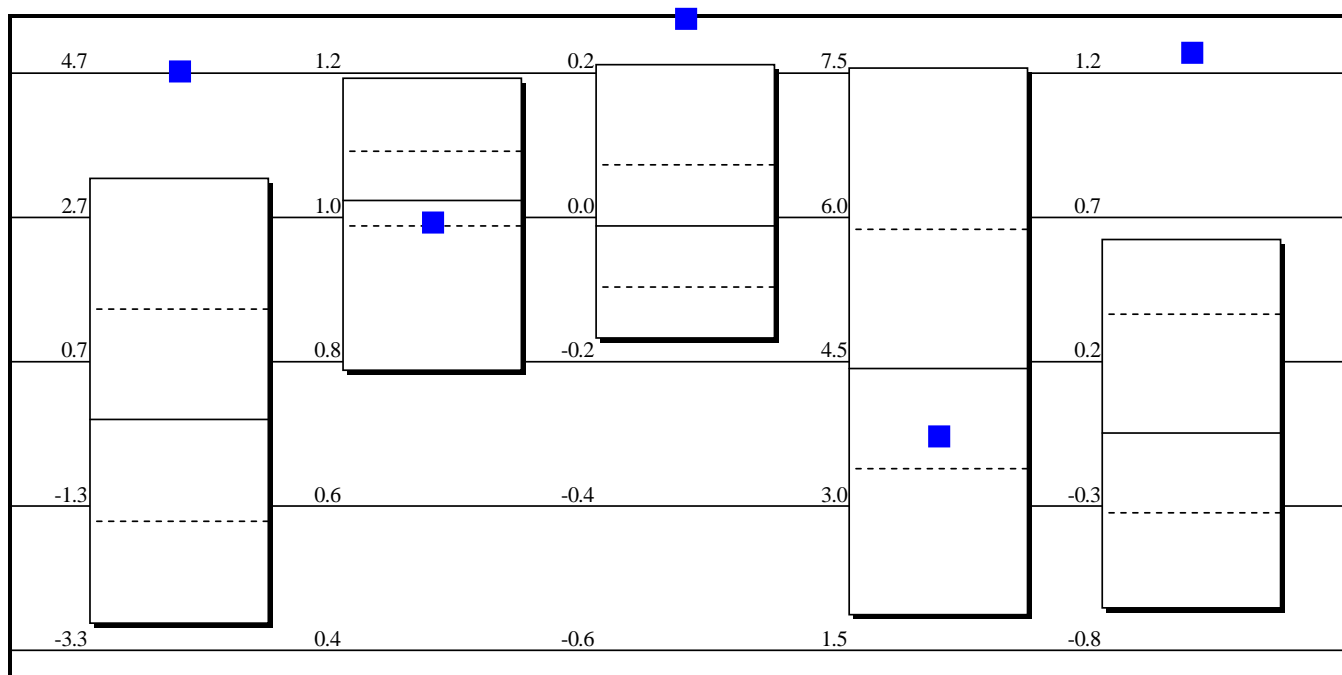
Calculated quarterly

— 1 Year Rolling Excess Return — 3 Year Rolling Excess Return

# Wellington (Gross)

## Comparison with the Mercer US Equity Mid Cap Core Universe

Risk and Return Characteristics (calculated quarterly) versus SP400 for the period from Mar 2004 to Dec 2008

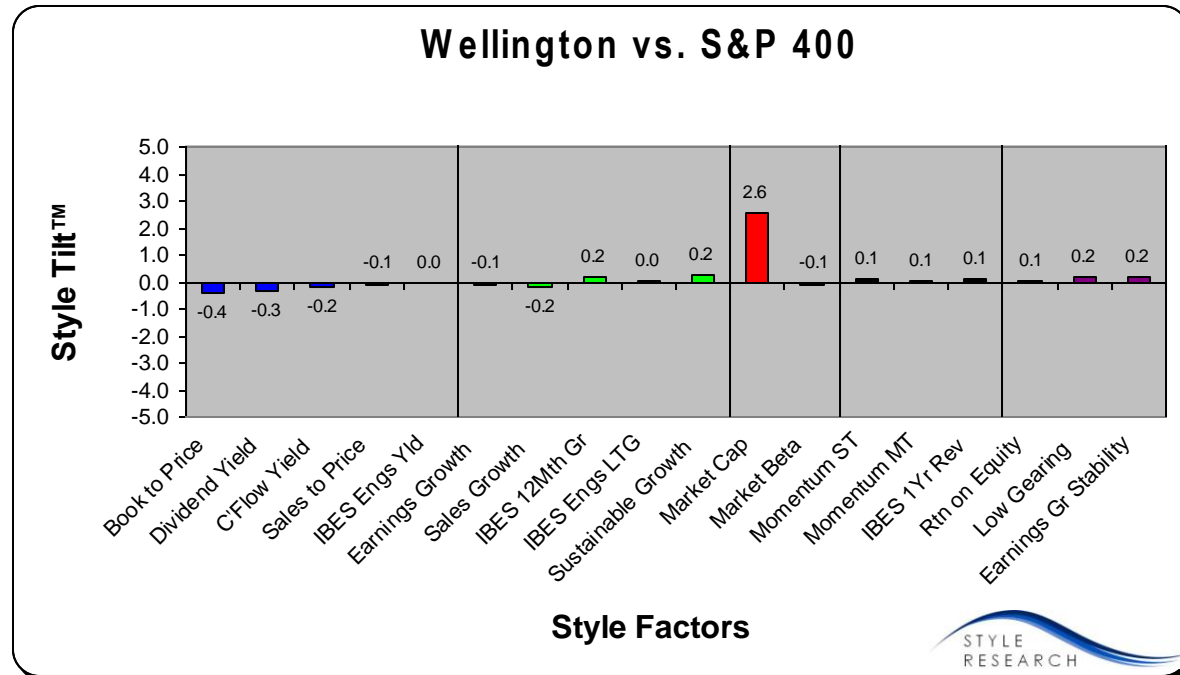


	Excess Return (% pa)	Beta	Reward to Risk	Tracking Error (% pa)	Information Ratio
Wellington	4.7 (0)	1.0 (74)	0.3 (1)	3.7 (69)	1.3 (0)
5th Percentile	3.2	1.2	0.2	7.5	0.6
Upper Quartile	1.4	1.1	0.1	5.9	0.4
Median	-0.1	1.0	0.0	4.4	0.0
Lower Quartile	-1.5	1.0	-0.1	3.4	-0.3
95th Percentile	-2.9	0.8	-0.2	1.9	-0.7
Number of Funds	45	45	45	45	45

# Positions: Style Analysis – Portfolio Style Skyline

## Wellington

### As of December 31, 2008



# CRM

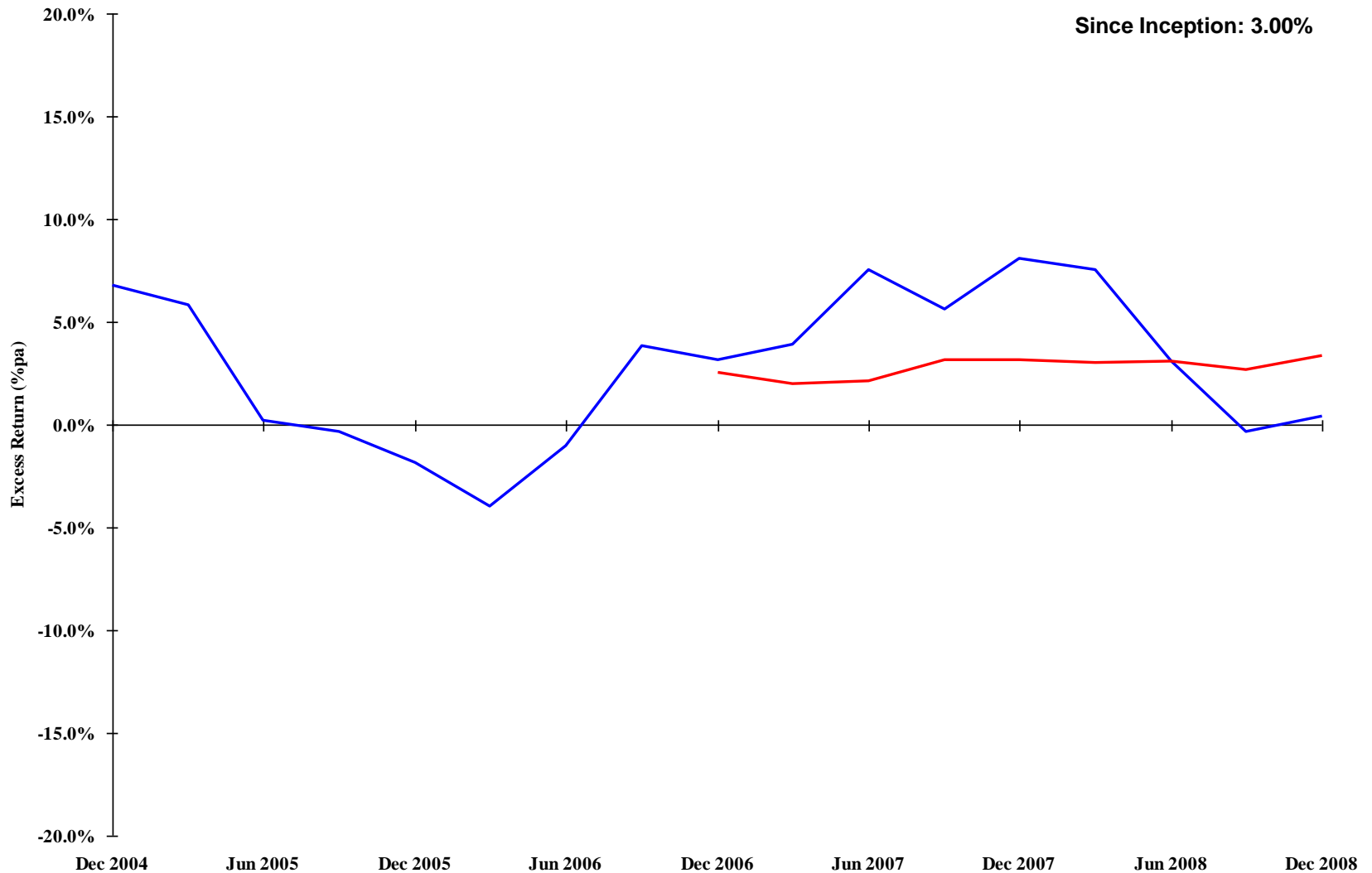
## Qualitative Factors

Factors	Description
People	<ul style="list-style-type: none"> <li>• Two co-portfolio managers are the primary decision makers, but the process is very team oriented. Analysts are key to determining the weighting of names in the portfolio.</li> <li>• Highly experienced team of sector-specialized analysts all use the same philosophy and process when researching stocks.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>• Believe that opportunities exist in under-followed, out-of-favor companies that are undergoing strategic changes such as divestitures, new products, new management, mergers and acquisitions.</li> </ul>
Process	<ul style="list-style-type: none"> <li>• Screen for stocks with attractive liquidity characteristics that are mispriced in the market.</li> <li>• Attempt to identify a dynamic change that is material to the operations of the company.</li> <li>• Produce financial models based upon projected cash flows.</li> <li>• Monitor the number of opinions of sell side analysts who closely follow the company and the nature of the shareholder base.</li> <li>• Set a price target for every name in the portfolio.</li> <li>• Use “mosaic theory” approach to investment management.</li> </ul>

# CRM (Net) vs. Midcap Value Blended Benchmark

Excess Return in US Equity Mid Cap Value from Dec 2004 to Dec 2008

Since Inception: 3.00%



Calculated quarterly

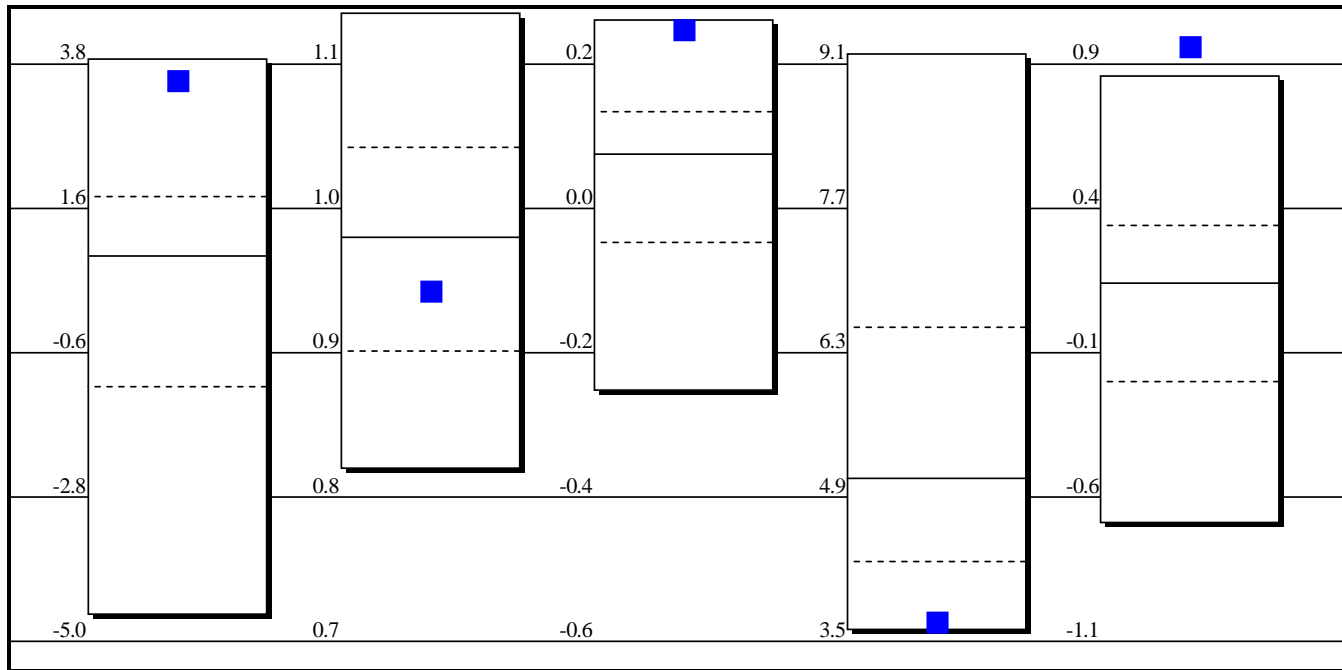
— 1 Year Rolling Excess Return

— 3 Year Rolling Excess Return

# CRM (Gross)

## Comparison with the Mercer US Equity Mid Cap Value Universe

Risk and Return Characteristics (calculated quarterly) versus MCV Idx for the period from Mar 2004 to Dec 2008

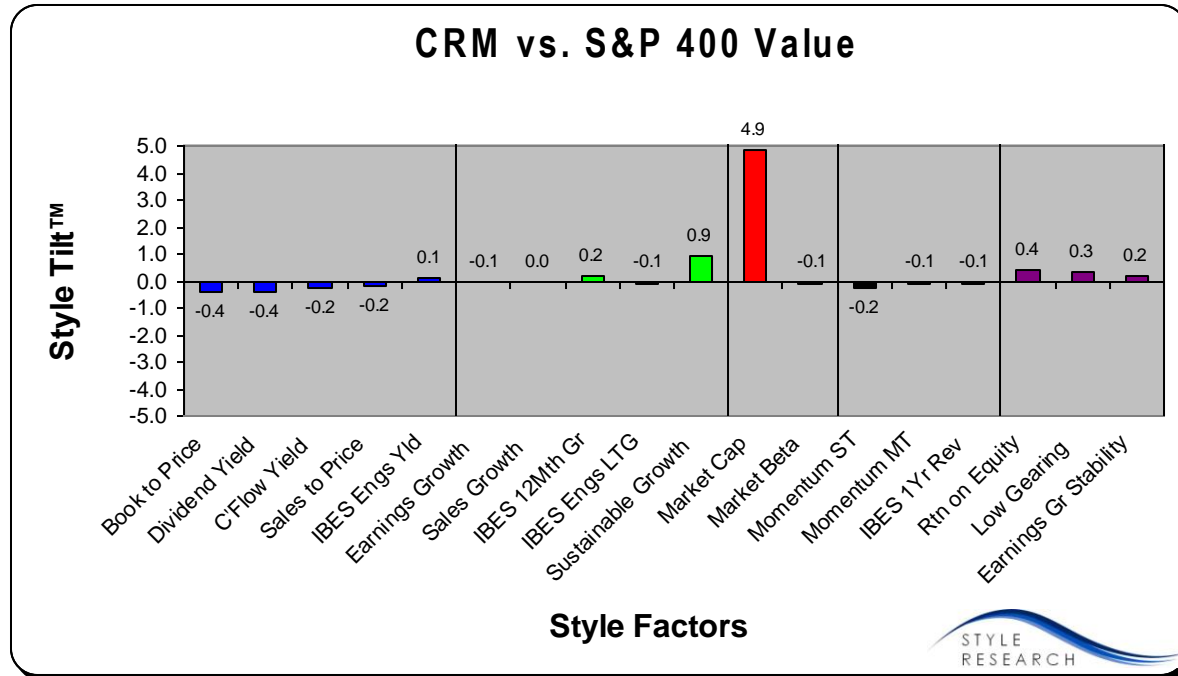


	Excess Return (% pa)	Beta	Reward to Risk	Tracking Error (% pa)	Information Ratio
CRM <span style="color: blue;">■</span>	3.5 (7)	0.9 (63)	0.2 (6)	3.7 (91)	1.0 (2)
5th Percentile	3.9	1.1	0.3	9.2	0.9
Upper Quartile	1.8	1.0	0.1	6.5	0.3
Median	0.9	1.0	0.1	5.1	0.1
Lower Quartile	-1.1	0.9	0.0	4.3	-0.2
95th Percentile	-4.6	0.8	-0.3	3.6	-0.7
Number of Funds	86	86	86	86	86

# Positions: Style Analysis – Portfolio Style Skyline

## CRM

As of December 31, 2008



# **U.S. Equity Small Cap Manager Reviews (Individual)**

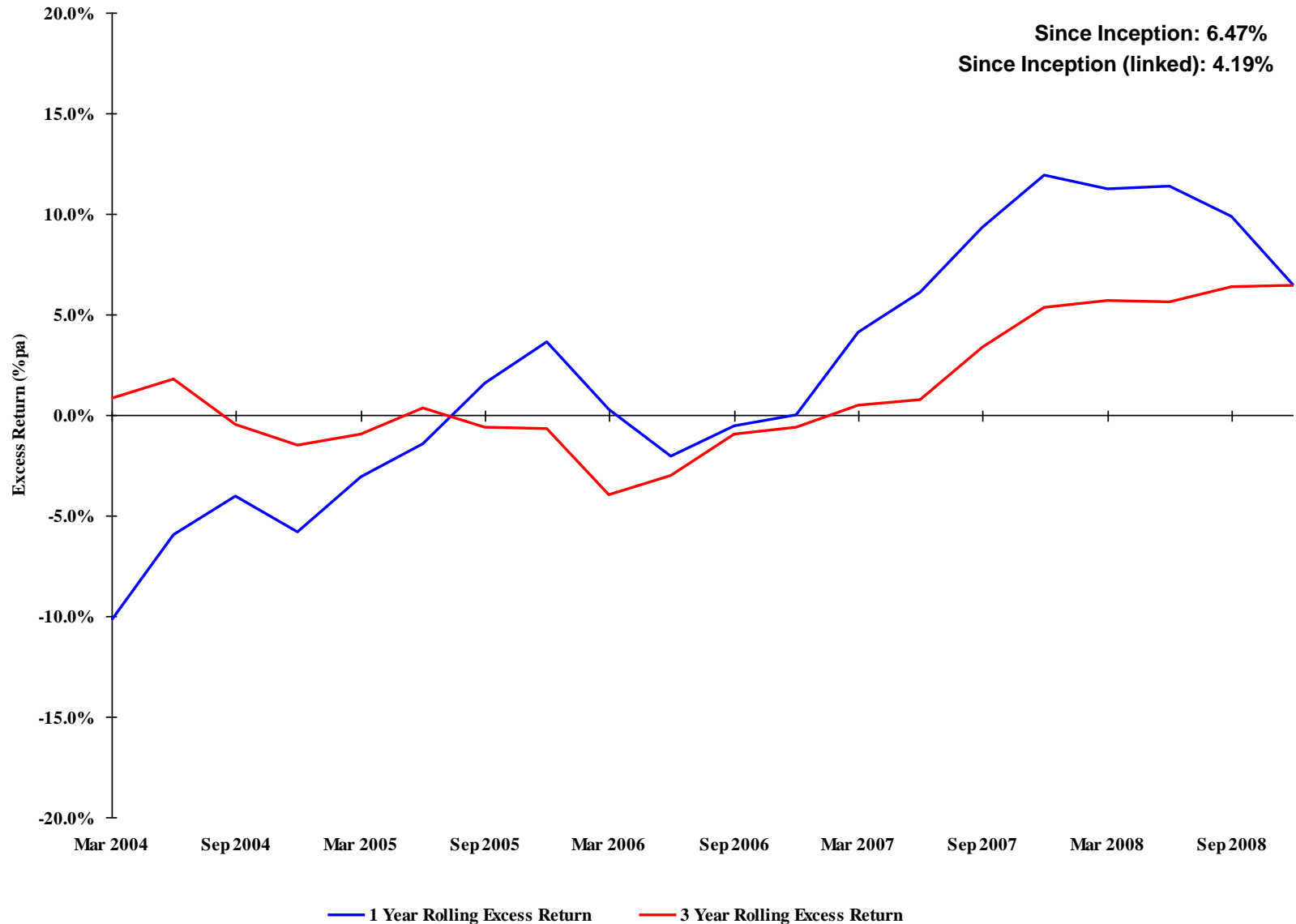
# Champlain Investment Partners

## Qualitative Factors

Factors	Description
People	<ul style="list-style-type: none"> <li>• Investment team is comprised of seasoned investment professionals who worked together at NL Capital in the past.</li> <li>• Portfolio manager/analyst position allows for investment staff to have an impact on the portfolio.</li> <li>• The firm's ownership structure and investment management process are advantages for staff.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>• Believe buying the shares of superior businesses with credible and sincere management teams at a discount to Fair or Intrinsic Value gives investors several potential paths to wealth creation.</li> </ul>
Process	<ul style="list-style-type: none"> <li>• Focus on cash flow from operations and assume the perspective of a creditor when attempting to value a company.</li> <li>• Identify simple, yet logical investment themes that vary by sector.</li> <li>• Before initiating a position, Champlain meets with management on multiple occasions and in different settings.</li> <li>• Buy superior companies at a discount; sell overvalued stocks.</li> </ul>

# Champlain Linked (Net) vs. S&P 600

## Excess Return in US Equity Small Cap Core from Mar 2004 to Dec 2008

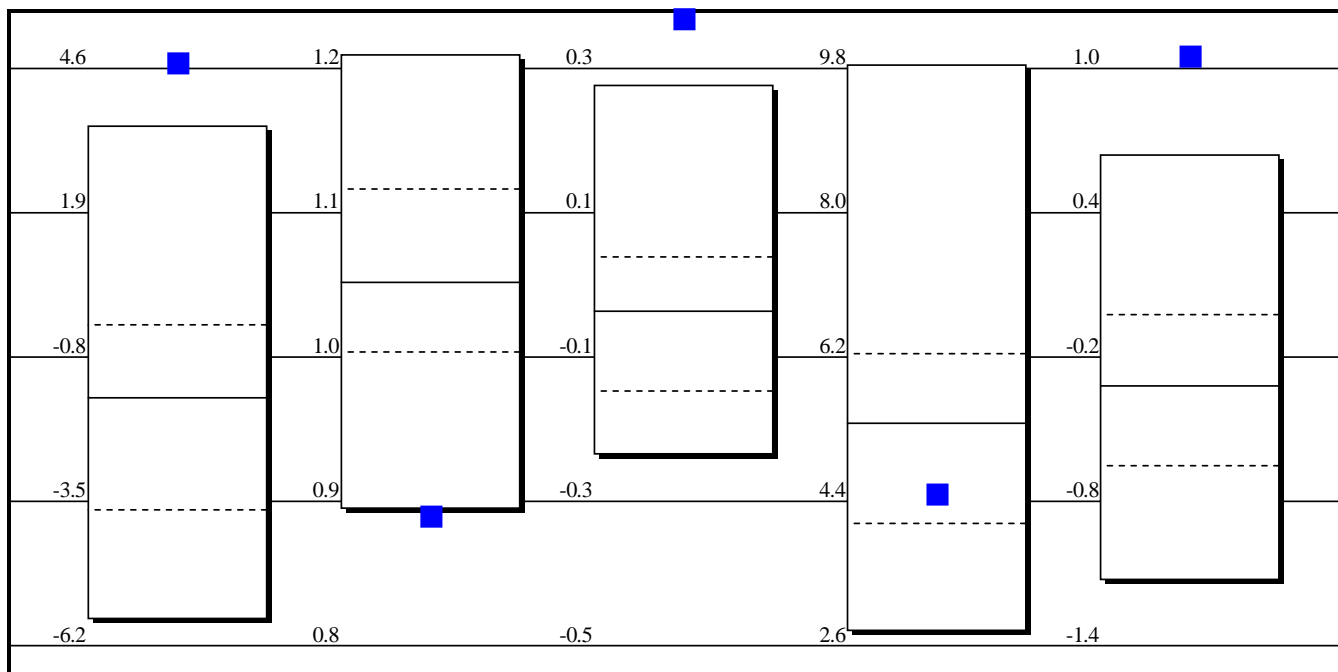


Calculated quarterly  
Champlain Composite linked with ASRS history

# Champlain Linked (Gross)

## Comparison with the Mercer US Equity Small Cap Core Universe

Risk and Return Characteristics (calculated quarterly) versus SP600SCUSD for the period from Mar 2004 to Dec 2004

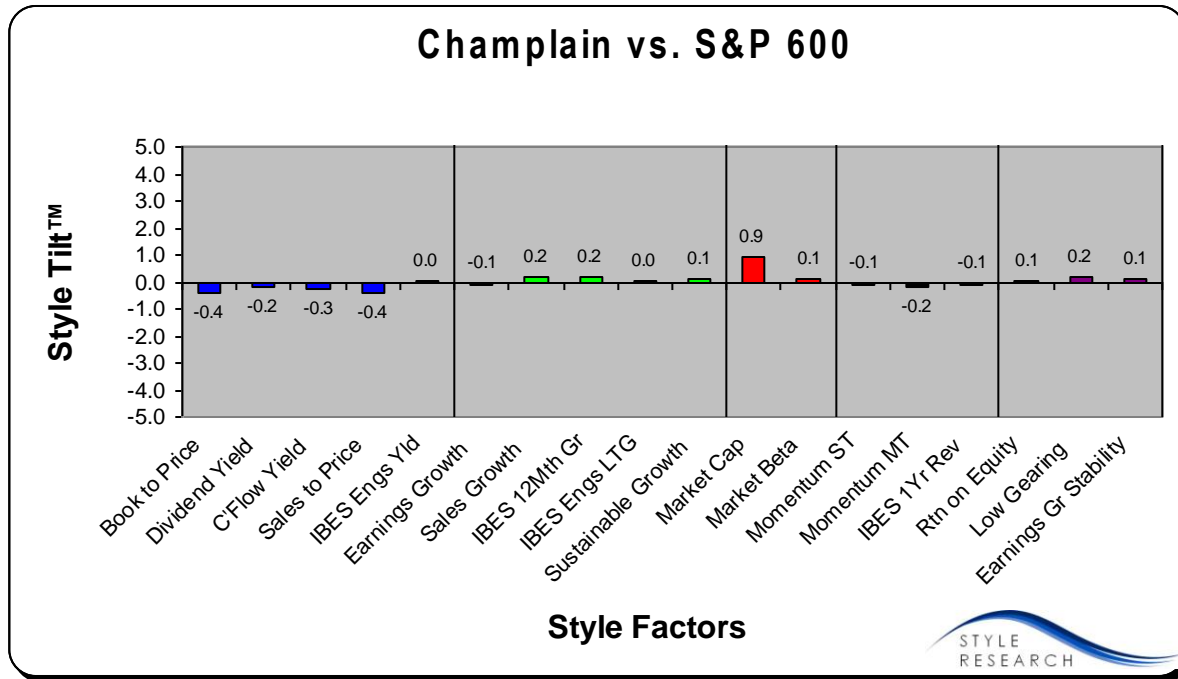


	Excess Return (% pa)	Beta	Reward to Risk	Tracking Error (% pa)	Information Ratio
Champlain <span style="color: blue;">■</span>	4.7 (4)	0.9 (95)	0.4 (1)	4.5 (64)	1.0 (0)
5th Percentile	3.5	1.2	0.3	9.8	0.6
Upper Quartile	-0.2	1.1	0.0	6.2	0.0
Median	-1.6	1.1	0.0	5.4	-0.3
Lower Quartile	-3.7	1.0	-0.1	4.1	-0.7
95th Percentile	-5.7	0.9	-0.2	2.8	-1.1
Number of Funds	101	101	101	101	101

# Positions: Style Analysis – Portfolio Style Skyline

## Champlain

### As of December 31, 2008



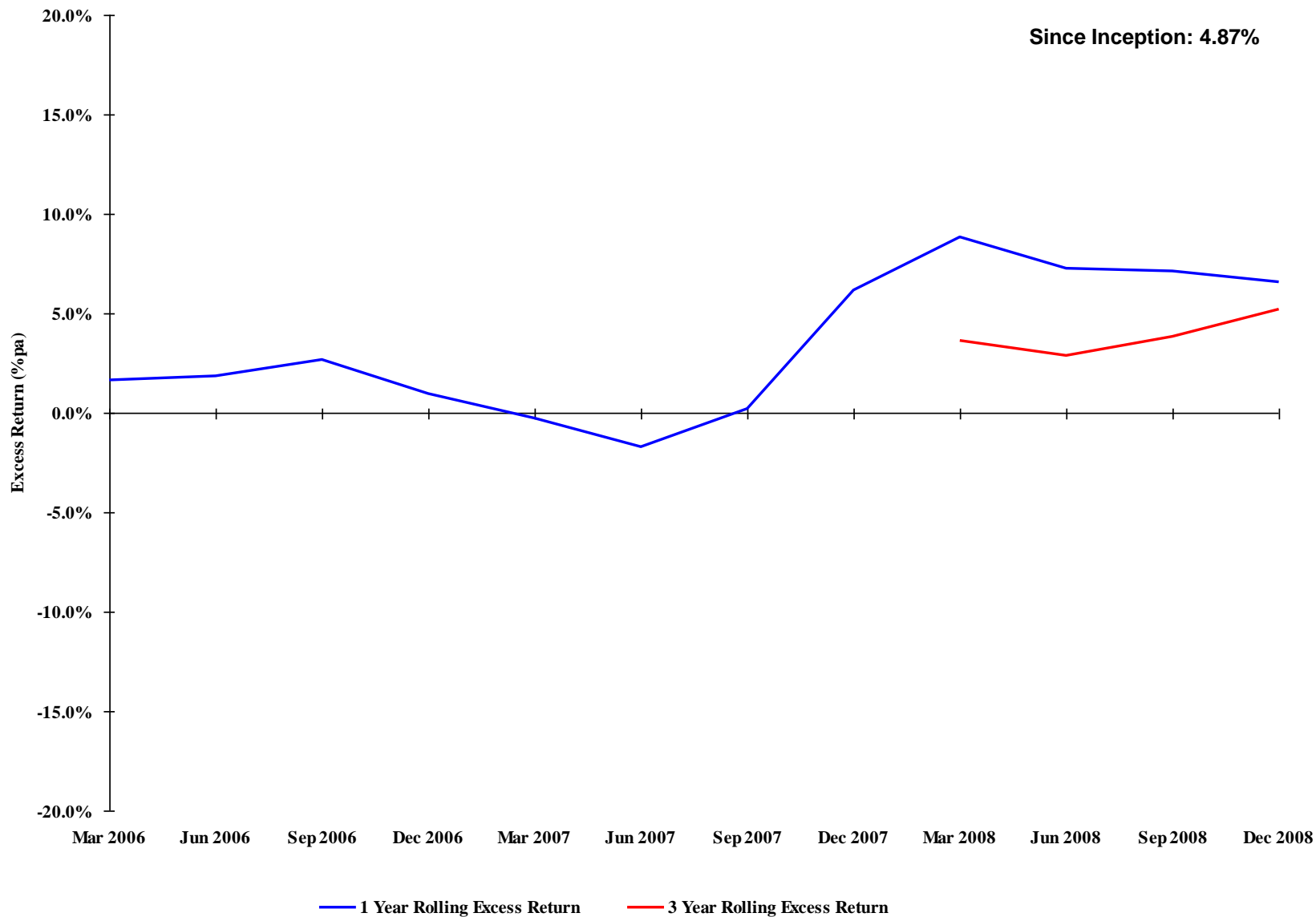
# TimesSquare

## Qualitative Factors

Factors	Description
People	<ul style="list-style-type: none"> <li>• The quality of research and stability and experience of the investment team are strengths.</li> <li>• Talented portfolio managers work well together and with the analyst team to apply the investment philosophy in a thorough and consistent manner.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>• Believe research, which places a particular emphasis on the assessment of management quality and an in-depth understanding of superior business models, will result in superior risk-adjusted returns.</li> </ul>
Process	<ul style="list-style-type: none"> <li>• Look for stocks with market values between \$300 million and \$5 billion with an expected three-year EPS/Sales growth rate above 15%.</li> <li>• Find companies with exceptional management, a sustainable competitive advantage and strong, consistent growth.</li> <li>• Conduct further in-depth analysis through detailed financial modeling and valuation work.</li> <li>• Purchase companies that have the potential to appreciate 25-50% over a 12-18 month time horizon.</li> </ul>

# TimesSquare SMID Growth (Net) vs. Russell 2500 Growth

## Excess Return in US Equity Small+Mid Growth from Mar 2006 to Dec 2008

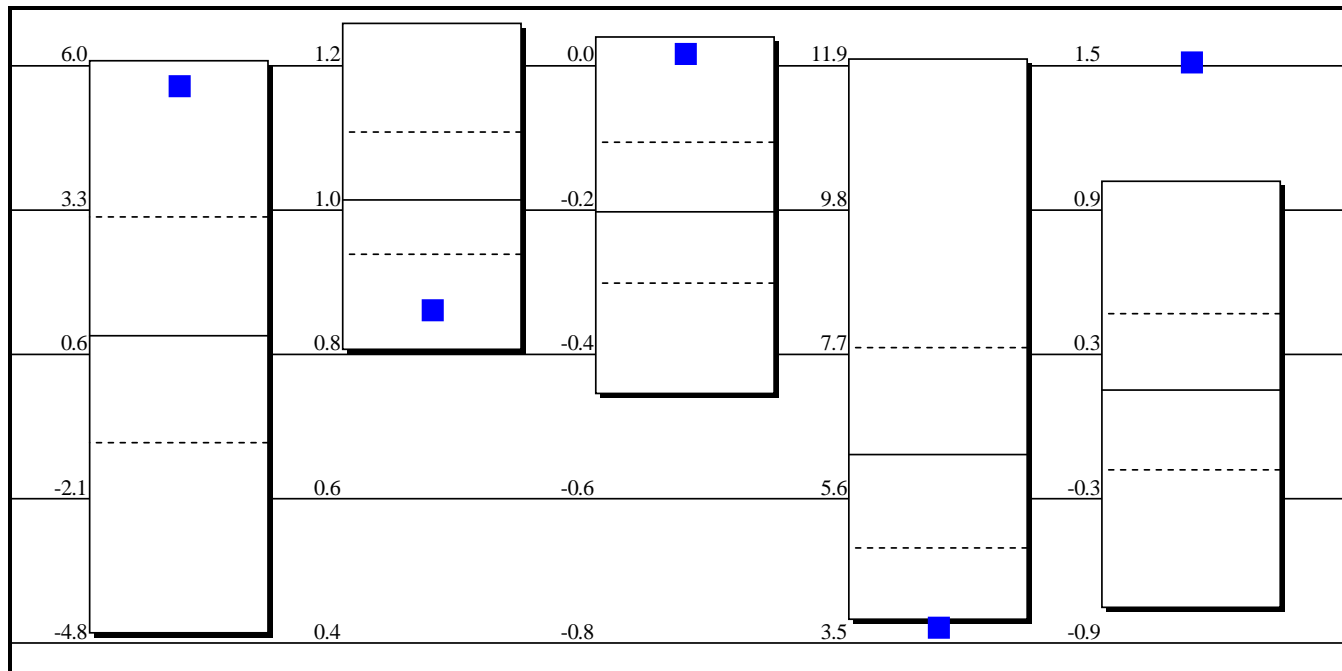


Calculated quarterly

# TimesSquare SMID Growth (Gross)

Comparison with the Mercer US Equity Small+Mid Growth Universe

Risk and Return Characteristics (calculated quarterly) versus RU2500G for the period from Jun 2005 to Dec 2008

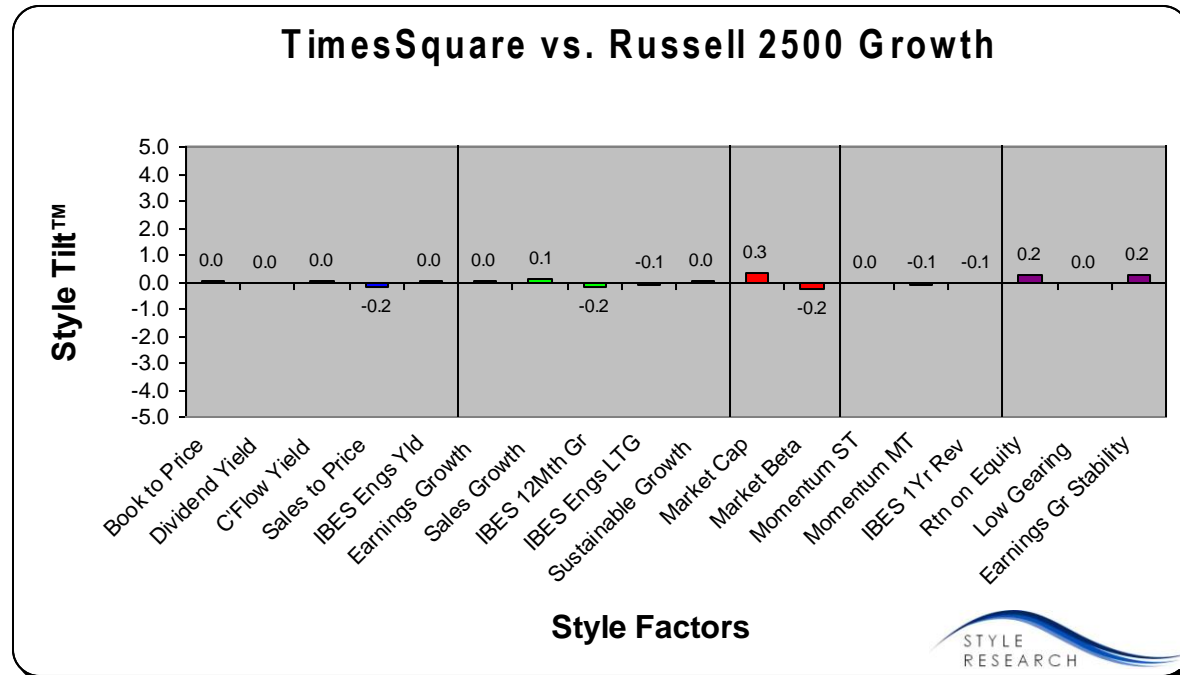


	Excess Return (% pa)	Beta	Reward to Risk	Tracking Error (% pa)	Information Ratio
TimesSquare <span style="color: blue;">■</span>	5.6 (7)	0.9 (89)	0.0 (6)	3.7 (96)	1.5 (1)
5th Percentile	6.1	1.3	0.0	12.0	1.0
Upper Quartile	3.1	1.1	-0.1	7.8	0.5
Median	0.9	1.0	-0.2	6.2	0.1
Lower Quartile	-1.1	0.9	-0.3	4.9	-0.2
95th Percentile	-4.7	0.8	-0.5	3.8	-0.8
Number of Funds	240	240	240	240	240

# Positions: Style Analysis – Portfolio Style Skyline

## TimesSquare

### As of December 31, 2008



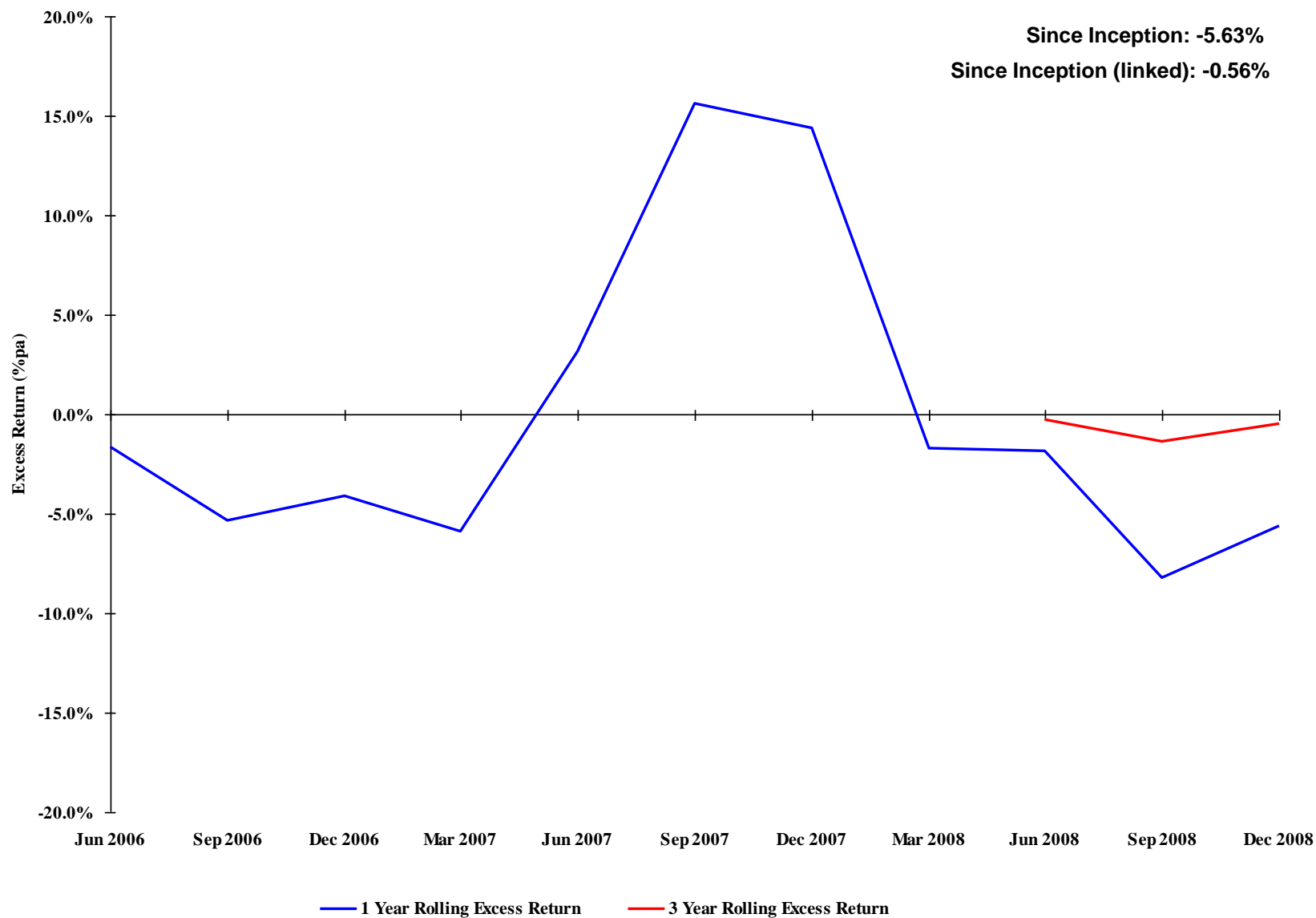
# Copper Rock Capital

## Qualitative Factors

Factors	Description
People	<ul style="list-style-type: none"> <li>• Team based approach with hybrid specialist-generalist model ensures depth of coverage across all sectors.</li> <li>• Lead Portfolio Manager has 18 years experience in the small and smid cap asset class; Assistant Portfolio Managers have an average of 12 years experience in the small and smid cap asset class; Research Analysts have an average of 10 years experience in small and smid cap asset class.</li> <li>• Two dedicated Traders with more than 20 years experience in the small and smid cap asset class</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>• Believe small and mid cap markets are inefficient and that a fundamental growth approach with a strong sell discipline provides the best opportunity to outperform in all market conditions.</li> </ul>
Process	<ul style="list-style-type: none"> <li>• Broad research coverage of entire benchmark</li> <li>• Narrow universe through organic idea generation, proprietary screens and bottom-up themes. Meeting with a company's management team is imperative before it can be a candidate for the portfolio.</li> <li>• Conduct detailed fundamental analysis. Requirements: Strong growth over a 12-18 month period, 15%+ revenue growth, 20%+ earnings growth including analysis of upwards revisions to earnings, and margin expansion.</li> <li>• Disciplined process with a "no excuses" sell discipline.</li> </ul>

# Copper Rock Linked (Net) vs. Russell 2500 Growth

Excess Return in US Equity Small+Mid Growth from Jun 2006 to Dec 2008

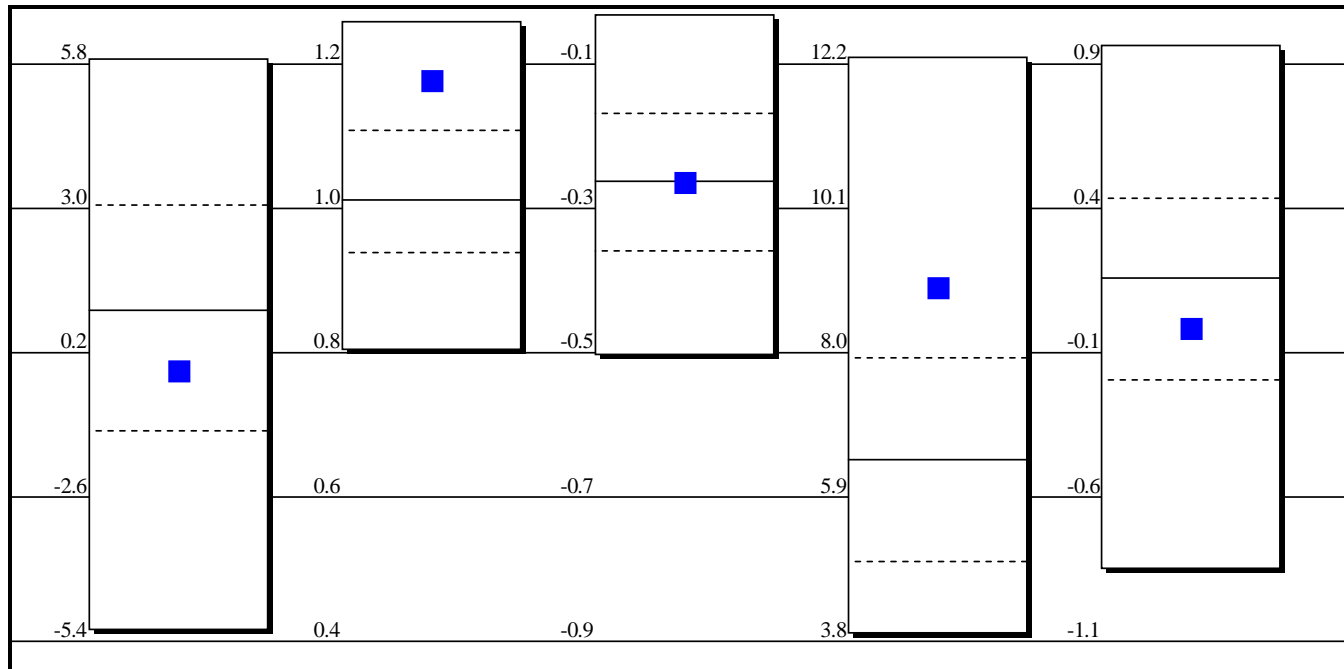


Calculated quarterly  
Copper Rock Composite linked with ASRS history

# Copper Rock Linked (Gross)

Comparison with the Mercer US Equity Small+Mid Growth Universe

Risk and Return Characteristics (calculated quarterly) versus RU2500G for the period from Sep 2005 to Dec 2008

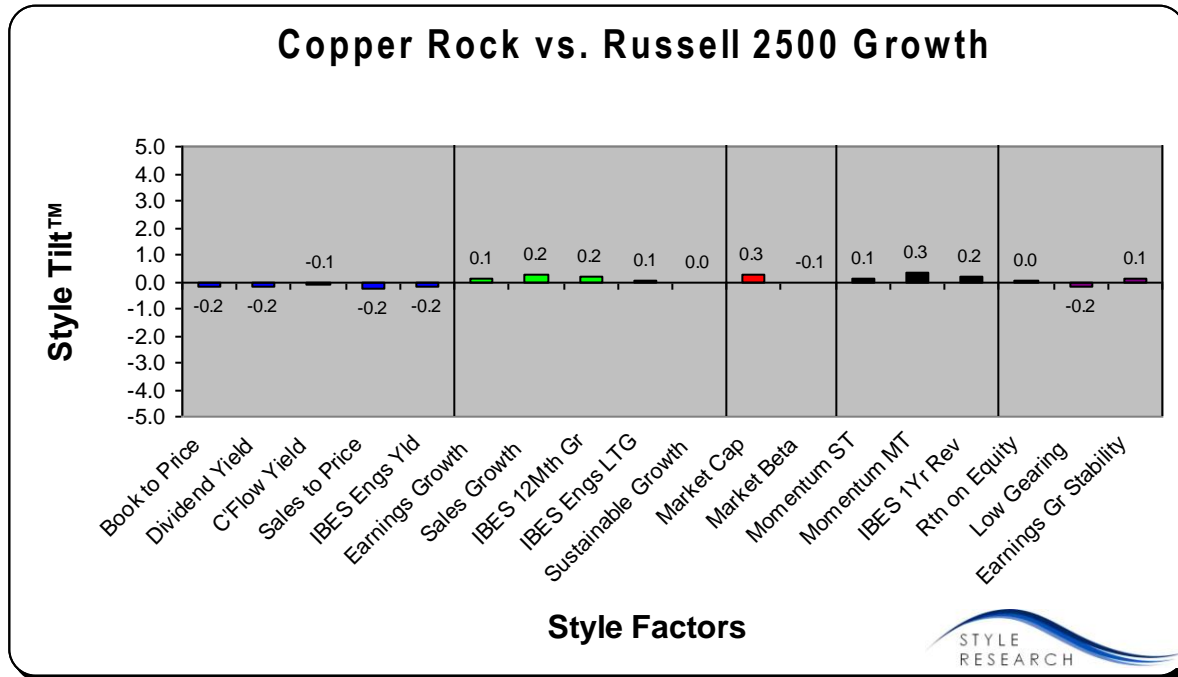


	Excess Return (% pa)	Beta	Reward to Risk	Tracking Error (% pa)	Information Ratio
Copperg <span style="color: blue;">■</span>	-0.2 (63)	1.2 (11)	-0.3 (50)	8.9 (16)	0.0 (63)
5th Percentile	5.9	1.3	0.0	12.3	1.0
Upper Quartile	3.1	1.1	-0.2	7.9	0.4
Median	1.0	1.0	-0.3	6.4	0.2
Lower Quartile	-1.3	0.9	-0.4	5.0	-0.2
95th Percentile	-5.2	0.8	-0.5	3.9	-0.9
Number of Funds	244	244	244	244	244

# Positions: Style Analysis – Portfolio Style Skyline

## Copper Rock

### As of December 31, 2008



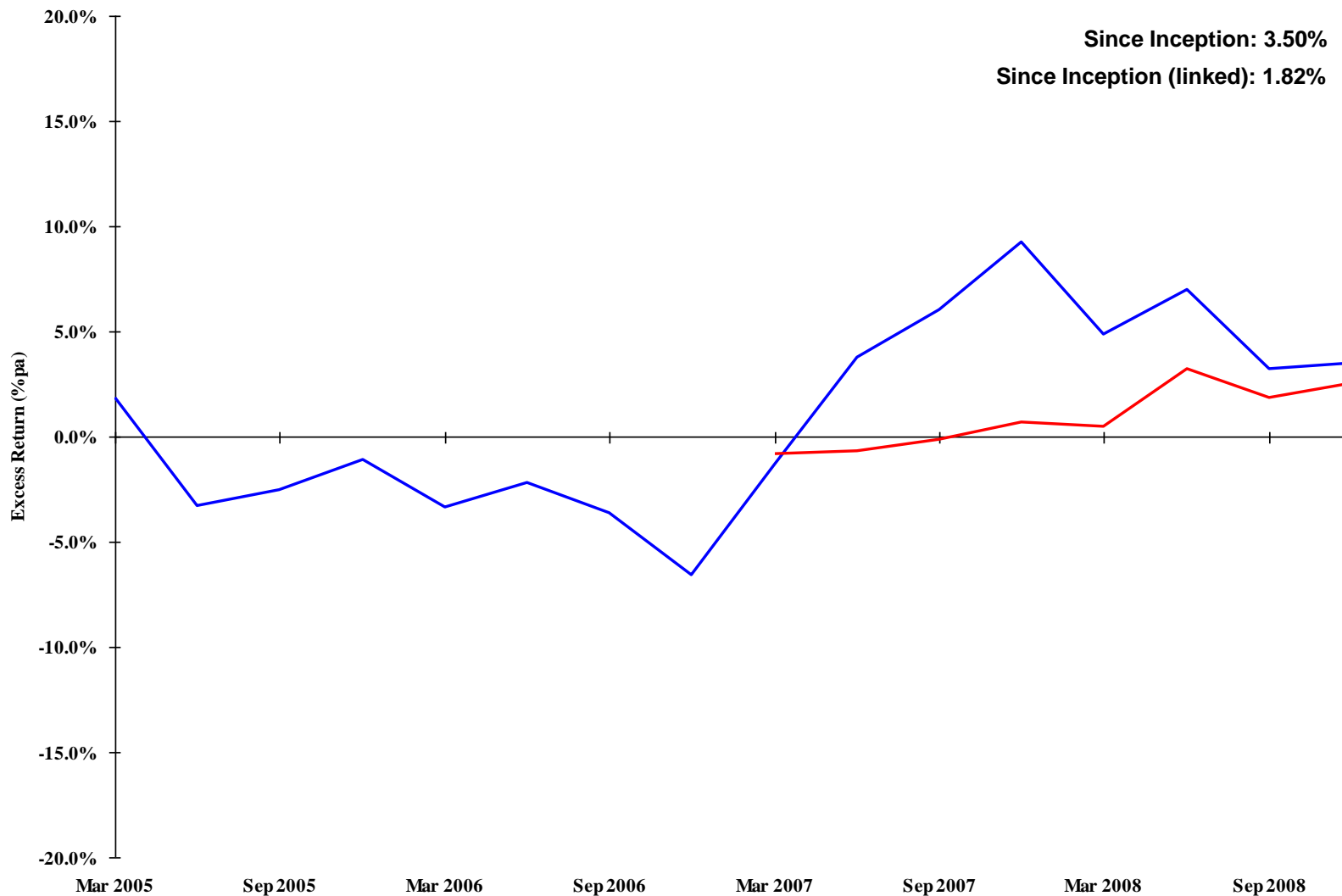
# IronBridge

## Qualitative Factors

Factors	Description
People	<ul style="list-style-type: none"> <li>• The firm's founders were instrumental in developing and enhancing the CFROI framework while they were at HOLT Value Associates, L.P. Since establishing IronBridge, the team has enhanced this framework on a proprietary basis.</li> <li>• All employees of IronBridge own shares in the firm, summing to roughly 75% of firm ownership.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>• IronBridge's investment philosophy is based on three key beliefs: <ul style="list-style-type: none"> <li>– The Cash Flow Return on Investment (CFROI) framework is the most effective tool for measuring true economic performance and valuing companies.</li> <li>– The Life Cycle concept is an important tool for identifying the correct path of analysis and managing portfolio risk.</li> <li>– Wealth creation is contingent upon management's ability to allocate capital appropriately relative to the company's position on the corporate Life Cycle.</li> </ul> </li> </ul>
Process	<ul style="list-style-type: none"> <li>• IronBridge's proprietary IronScore places all stocks into their appropriate Life Cycle category and then ranks each stock within its category based on proprietary factors; high ranking stocks are subjected to fundamental analysis.</li> <li>• The portfolio is diversified by both Life Cycle and Sector to reduce the impact of systematic factors, allowing performance to be driven by stock selection.</li> <li>• IronBridge utilizes multiple trading platforms to ensure best execution.</li> </ul>

# IronBridge Linked (Net) vs. Russell 2500

Excess Return in US Equity Small+Mid Core from Mar 2005 to Dec 2008



Calculated quarterly

— 1 Year Rolling Excess Return

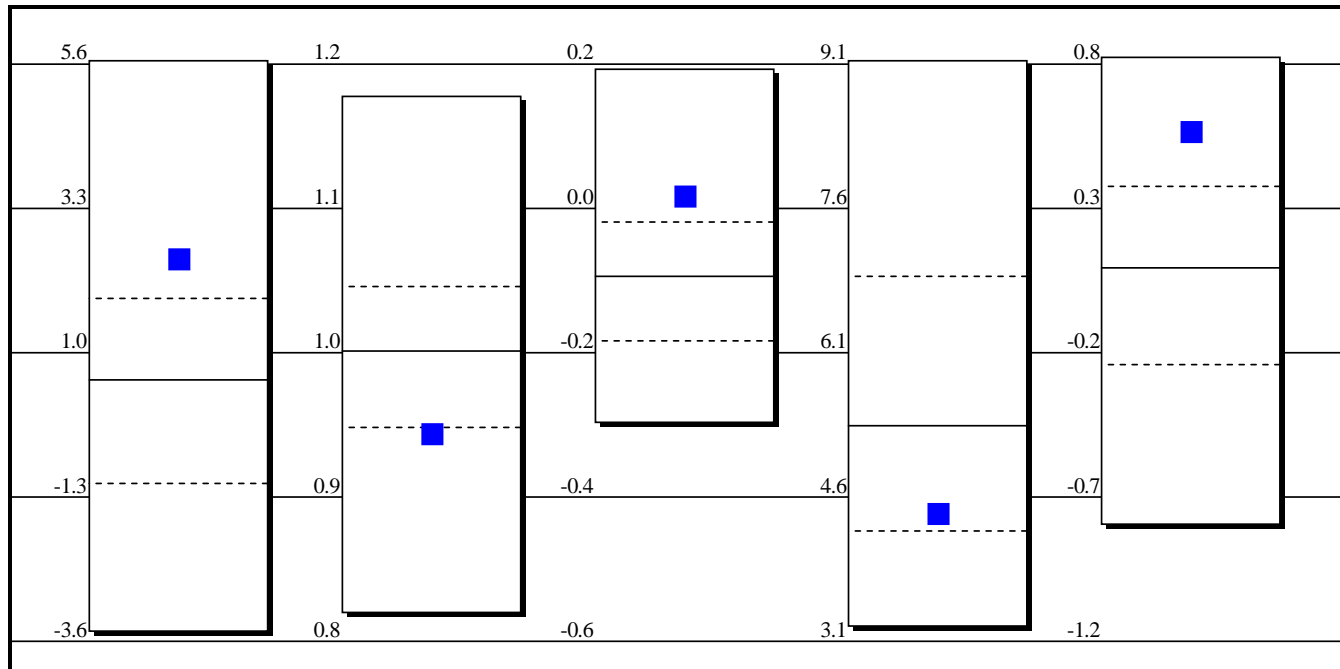
— 3 Year Rolling Excess Return

IronBridge Composite linked with ASRS history

# IronBridge Linked (Gross)

## Comparison with the Mercer US Equity Small+Mid Core Universe

Risk and Return Characteristics (calculated quarterly) versus RU2500 for the period from Jun 2004 to Dec 2008

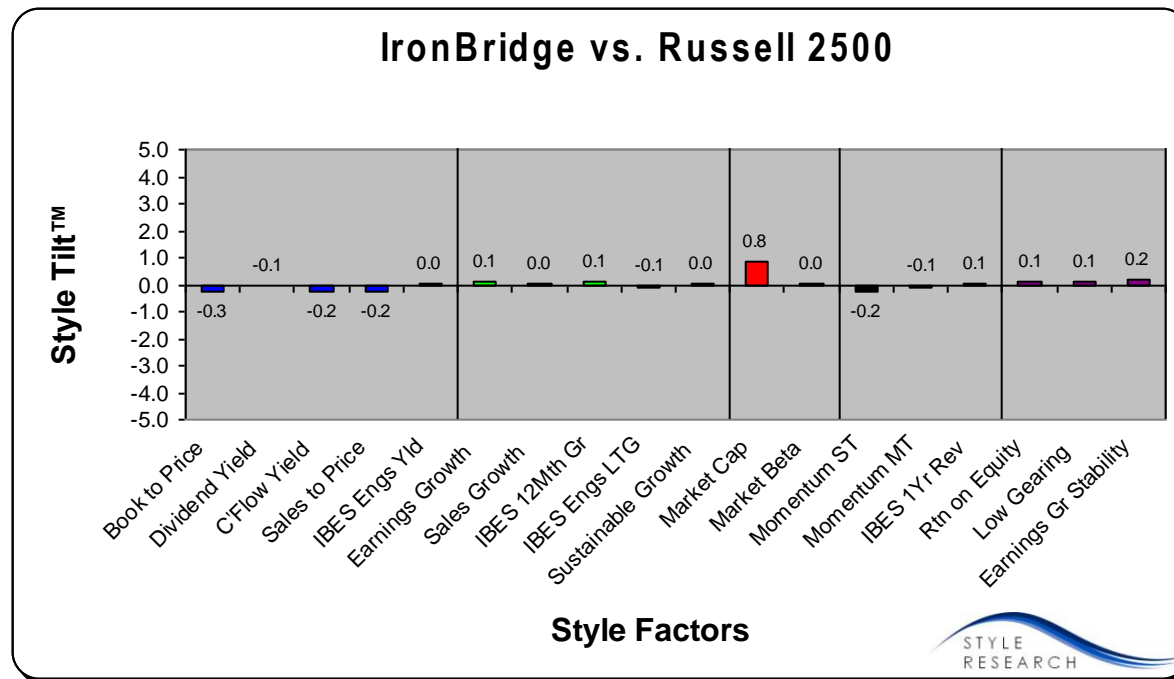


	Excess Return (% pa)	Beta	Reward to Risk	Tracking Error (% pa)	Information Ratio
IronBridge	2.5 (21)	0.9 (76)	0.0 (21)	4.4 (69)	0.6 (14)
5th Percentile	5.6	1.2	0.2	9.1	0.8
Upper Quartile	1.9	1.0	0.0	6.9	0.4
Median	0.5	1.0	-0.1	5.3	0.1
Lower Quartile	-1.1	0.9	-0.2	4.2	-0.2
95th Percentile	-3.5	0.8	-0.3	3.2	-0.8
Number of Funds	148	148	148	148	148

# Positions: Style Analysis – Portfolio Style Skyline

IronBridge

As of December 31, 2008



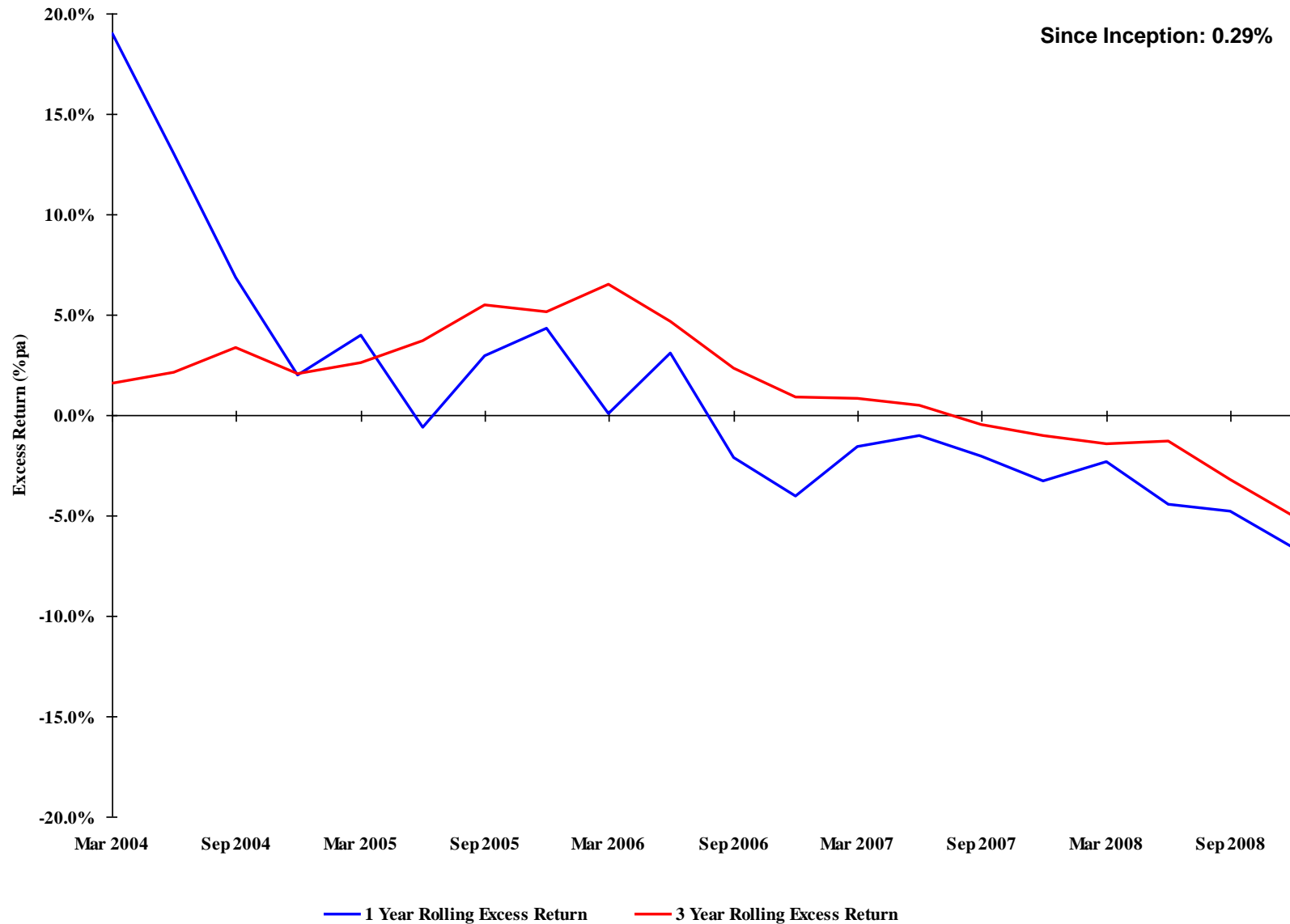
## Dimensional Fund Advisors

### Qualitative Factors

Factors	Description
People	<ul style="list-style-type: none"> <li>• An Investment Policy Committee focuses on the development of long-term strategy enhancements, while a separate team approves strategy implementations and maintains daily oversight of the strategies. This structure creates a linkage between research and portfolio management.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>• Based on the work of Eugene Fama and Kenneth French of the University of Chicago, DFA contends that value stocks, once adjusted for capitalization and general market movements, produce higher average returns and lower standard deviations than other stocks.</li> </ul>
Process	<ul style="list-style-type: none"> <li>• Seek to invest in companies whose market capitalization is in the smallest 8% of the investment universe.</li> <li>• Use a value screen to identify securities considered value stocks – look for high book value in relation to a company's market value (BtM).</li> <li>• Additional screens are used to weed out stocks with asset class or pricings concerns.</li> <li>• Trading opportunities for all stocks are monitored and must be favorable before purchase.</li> <li>• A security becomes a sell candidate once it no longer fits DFA's book to market requirements, and size criteria and passes the momentum screens; this patient trading technique has generally resulted in very low trading costs.</li> </ul>

# DFA Small Cap Value (Net) vs. DFA Blended Benchmark

## Excess Return in US Equity Small Cap Value from Mar 2004 to Dec 2008

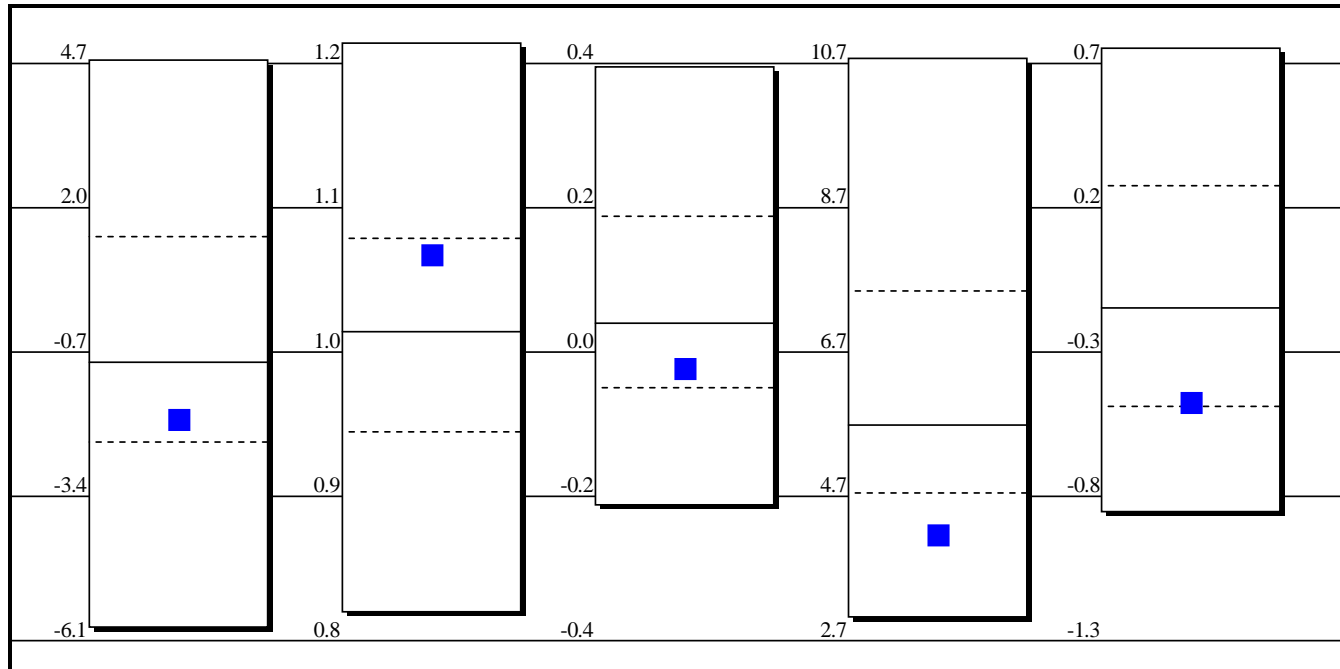


Calculated quarterly

# DFA Small Cap Value (Gross)

Comparison with the Mercer US Equity Small Cap Value Universe

Risk and Return Characteristics (calculated quarterly) versus DFABM for the period from Mar 2004 to Dec 2008



	Excess Return (% pa)	Beta	Reward to Risk	Tracking Error (% pa)	Information Ratio
DFASCV ■	-2.0 (68)	1.1 (32)	0.0 (68)	4.2 (83)	-0.5 (74)
5th Percentile	4.8	1.2	0.4	10.8	0.7
Upper Quartile	1.5	1.1	0.2	7.5	0.3
Median	-0.9	1.0	0.0	5.7	-0.1
Lower Quartile	-2.4	0.9	-0.1	4.7	-0.5
95th Percentile	-5.9	0.8	-0.2	3.0	-0.9
Number of Funds	157	157	157	157	157

# Positions: Style Analysis – Portfolio Style Skyline

## Dimensional Fund Advisors

### As of December 31, 2008

